

2008 Investigation and Groundwater Monitoring Report

**Former Electric Machinery Site
St. Cloud, Minnesota**

**Prepared for
Cooper Industries, LLC
ABB**

November 2008



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1.0 Introduction

This report describes the results of the field investigation activities conducted in July and August 2008 by Barr Engineering Company (Barr) and the 2008 annual groundwater monitoring results at the Former Electric Machinery Site (Site) in St. Cloud, Minnesota (Figure 1). Additional background information from the site can be found in previous investigation reports (Barr, 1987, 1988, and 2005).

The investigation activities included the following three components:

- Soil vapor assessment near the former soil vapor extraction (SVE) well EM-9S.
- Soil sampling in a historical source area near the former pump-out well PW-1 to verify whether significant targeted source materials remain on the Site.
- Groundwater sampling north of the site to delineate the extent of the chlorinated volatile organic compound (VOC) plume in the lower aquifer.

Groundwater samples were collected in 2008 as part of the annual groundwater monitoring program at the Site, and the results are also included in this report.

This report is organized into the following sections:

- Section 1: This Introduction
- Section 2: Vapor Intrusion Assessment
- Section 3: Source Area Investigation
- Section 4: Additional Plume Delineation
- Section 5: 2008 Annual Groundwater Monitoring
- Section 6: Conclusions and Recommendations
- Section 7: References

2.0 Soil Vapor Assessment

A soil vapor assessment was conducted in July 2008 as the final part of the assessment proposed in the 2005 Annual Report, Section 6.2.5., “Analysis of Potential Vapor Intrusion into Buildings” (Barr, 2006). A preliminary vapor intrusion assessment was conducted in 2006, which included collecting soil gas samples from former SVE well EM-9S. As reported in the 2006 Annual Monitoring Report, the results were greater than U.S. Environmental Protection Agency (EPA) Target Soil Gas Concentrations and Minnesota Pollution Control Agency (MPCA) 2006 draft Vapor Intrusion Industrial-Commercial Screening Levels, but below Minnesota Occupational Safety and Health Administration (OSHA) workplace criteria (Barr, 2007). Therefore, in accordance with the path outlined in the 2005 Annual Report, additional soil gas samples were collected in July 2008 at five probe locations near well EM-9S and adjacent to the current site building, in general accordance with the procedures in the MPCA’s July 2007 Guidance Document 4-01a: “Vapor Intrusion Assessments Performed during Site Investigations.” The MPCA published a new guidance document for vapor intrusion assessment in September, 2008, following the July 2008 soil gas sampling event. The sampling methods for these two guidance documents are generally the same, but the recommended sampling locations differ. This new guidance document, “Risk-Based Guidance for the Vapor Intrusion Pathway” (2008 MPCA Vapor Intrusion Guidance), was used to evaluate the soil gas analytical results as discussed below.

2.1 Soil Vapor Assessment Activities

Five direct push borings were advanced to collect soil gas samples from a “worst case” location (WC-1) and four radial sample locations, R-1, R-2, R-3 and R-4, as shown on Figure 2. WC-1 was placed near well EM-9S where the former SVE system operated. Matrix Environmental, LLC (Matrix) completed the soil vapor sample points. Samples were collected from boring WC-1 at depths of 7, 11 and 17 feet below ground surface (bgs); the water table was at a depth of approximately 22 feet bgs during the sampling. The four radial soil gas samples (R-1 through R-4) were collected at depths of 3-4 feet bgs. The soil gas samples were collected in Summa® canisters instrumented with a vacuum gauge, as described in the MPCA’s Guidance Document 4-01a.

The soil gas samples were analyzed by Pace Analytical Services, Inc. (Pace) by EPA method TO-15 for the contaminants of concern (COCs) included in the Record of Decision (ROD) for the Site and those added by the MPCA in their April 14, 2005 letter, which include the following:

COCs listed in the ROD	Additional Parameters
tetrachloroethylene (PCE)	1,1-DCE
trichloroethylene (TCE)	vinyl chloride
1,1,1-trichloroethane (1,1,1-TCA)	benzene
1,1-dichloroethane (1,1-DCA)	chloromethane
cis 1,2-dichloroethylene (cis 1,2-DCE)	1,2-DCA
trans 1,2-dichloroethylene (trans 1,2-DCE)	chloroform
	1,4-dioxane*

* 1,4-dioxane was not reported for soil gas samples; however, the samples did not indicate the presence of tentatively identified compounds.

2.2 Soil Vapor Assessment Results

Soil gas analytical results are shown on Table 1. Laboratory analytical reports are included in Appendix A. In general, the highest concentrations were identified at WC-1 and R-3. Overall concentrations were generally similar in magnitude to vapor results from samples collected by Barr at EM-9S in 2006 (Barr, 2007).

2.2.1 Criteria for Evaluating Soil Vapor Results

The MPCA Vapor Intrusion Guidance issued in September 2008 was used to evaluate the soil gas analytical results (MPCA, 2008a). The MPCA guidance utilizes a three-tiered approach for evaluating the vapor intrusion pathway. Tier 1 includes an evaluation of existing site information to determine whether vapor intrusion is a potential concern. Tier 2 involves collecting subsurface soil samples near existing or proposed buildings. Tier 3 includes collection of building-specific information, which may include sub-slab and indoor air sampling and a building inspection and air quality survey. Although the guidance was published in September 2008, after the soil gas samples were collected in July 2008, the vapor assessment at the Site fits the general description of a Tier 2 evaluation (MPCA, 2008a).

Soil gas analytical results were compared to the MPCA vapor intrusion screening values (ISVs), 10 times the ISVs and 100 times the ISVs. In addition, because the Site is currently used as an industrial property, soil gas analytical results were compared to Minnesota OSHA permissible exposure limits (MN TWA, STEL and Ceiling Limits for Air Contaminants). A comparison to several criteria was performed in order to assess the range of concentrations at the Site and to evaluate whether additional assessment or evaluation is warranted. Subsurface soil gas results that exceed ISVs or OSHA criteria do not in and of themselves indicate that corrective action is required. These criteria are designed to be used for screening for inhalation risks due to direct exposure to

these concentrations in indoor air. Specifically, the ISVs are conservative screening levels designed to be protective of individuals, including sensitive subgroups, over a continuous lifetime of exposure to these concentrations in indoor air (MPCA, 2008b). The MPCA guidance uses multiples of the ISV (10 and 100 times the ISV) as screening levels for subsurface and sub-slab soil gas concentrations to evaluate whether further investigation or action is recommended. The 2008 MPCA Vapor Intrusion Guidance indicates that the ISVs are not applicable for all properties:

At industrial facilities that manufacture or use the potential chemicals of concern for the vapor intrusion pathway, the ISVs will not replace the applicable OSHA occupational exposure concentrations. At other receptor locations, however, the ISVs and the other media-specific screening values will be used to evaluate risks posed by vapor intrusion. (MPCA, 2008a)

Reportedly, Grede Foundry (an iron foundry) does not currently use chlorinated VOCs at the Site facility. Grede Foundry obtained a No Association Letter from the MPCA on May 19, 1999 for the identified release at the site, which was subject to the condition that they should continue to use alternatives to chlorinated VOCs. Chemical inventory of Grede's operation will be performed to identify all chemicals, Material Safety Data Sheets, etc. as a component of the Tier 3 evaluation, as discussed later. Typically, iron foundries use spray cans of oils, degreasers, solvents, paint, etc. as part of their maintenance and manufacturing operations.

2.2.2 Comparison to MN OSHA Criteria

All soil gas analytical results were well below MN OSHA permissible exposure limits, as shown on Table 1.

2.2.3 Results Above 100 Times MPCA ISVs

Results from the WC-1 samples and two radial samples, R-2 and R-3, were above 100 times the ISVs for PCE and TCE.

2.2.4 Results Above MPCA ISVs

Sample results for cis 1,2-DCE and benzene from all depths at WC-1 were also above either the ISV or 10 times the ISV. Some results from the other radial samples, R-1 and R-4, were above 10 times the ISVs but below 100 times the ISVs. Benzene results at all locations except for R-4 were above the ISV, as was 1,1,1-TCA at R-3.

2.3 Recommendations to Address Vapor Intrusion

MPCA guidance states that if soil gas results obtained during a Tier 2 evaluation are above 100 times the ISVs, a Tier 3 building-specific vapor investigation should be conducted to determine if a

complete exposure pathway exists, with the exception of industrial facilities that use the VOCs of concern in their operation, as discussed previously. Building ventilation controls may be considered at any stage of the investigation (MPCA, 2008a).

The goal of a Tier 3 evaluation is to determine if there is a complete exposure pathway, and if response actions are required. The Tier 3 evaluation includes an interior building inspection and indoor air quality survey and can also include sub-slab, indoor air and outdoor ambient air sampling..

It is recommended to conduct a Tier 3 evaluation that will consist of a building inspection and air quality survey. The building inspection will include an evaluation of the facility's HVAC system, operation of the system, and documentation of the type of building ventilation, the type of building construction, information on building use and occupants, potential vapor entry points, etc. The air quality survey will include a chemical inventory and documentation of facility processes to identify potential sources of interior background contamination. Foundries typically have baseline odors due to metal pouring, furnaces, oils, etc. In order to minimize disturbance to the facility operations at the Site, sub-slab sampling is not recommended. An evaluation for the need to collect indoor and outdoor air samples will be completed following the facility inspection, and will include multiple lines of evidence, including potential indoor or outdoor background sources, building use, construction and ventilation, as well as consideration of the site conceptual model.

3.0 Targeted Source Area Investigation

A source area investigation was conducted in July and August 2008 near the former pump-out well PW-1 to verify whether significant targeted source material remains on the Site. The targeted source area refers to source material associated with the parameters defined in the ROD as COCs as listed in Table 2.

3.1 Source Area Investigation Field Activities

Three direct-push (Geoprobe) soil borings (PB-5, PB-6 and PB-7; Figure 2) were completed at the Site to investigate soil conditions near an historical source area and to collect analytical soil samples. Direct-push boring services were provided by Matrix. Borings were advanced to thirty feet bgs in two to four foot drives and continuously logged for visual classification and field screened for evidence of contamination by a Barr geologist. Boring logs are included in Appendix B.

Field screening included observations of incidental odor, discoloration, and sheen and headspace volatile organic vapor screening. Headspace screening was performed using a flame-ionization detector (FID) or photo-ionization detector (PID) equipped with an 11.8 eV lamp. Soils encountered were classified in accordance with ASTM D-2488, Standard Practice for Description and Identification of Soils (Visual/Manual). All sampling and downhole equipment was decontaminated prior to use and between borings.

3.2 Source Area Investigation Results

The source area borings did not identify any significant presence of targeted source material above or below the water table. Field screening observations and soil descriptions are noted on the boring logs (Appendix B). Soils in the source area were generally found to consist of sand with variable amounts of silt. One gravel lens with up to 25% fines was observed at 23.5 feet bgs in boring PB-7, and a sand lens with slightly more silt and clay than the surrounding sediments was observed at about 23 feet in boring PB-5. Based on field observations during boring advancement, the water table was at a depth of approximately 22 feet bgs during the source area investigation.

Little to no evidence of impact was observed in the source area borings above 23 feet bgs. Potential impacts were observed in PB-5 in a discrete zone at approximately 23 feet bgs, with headspace readings of 1,922 ppm, an odor, and slight sheen were observed in the sand lens with increased fines.

A soil sample was collected at this location between 22.7-23.6 feet bgs and submitted to Pace for analysis of the ROD COCs (as listed in Section 2.1). Soil analytical results from the sample collected at PB-5 were all non-detect for the ROD VOCs, as shown in Table 2. Headspace readings at 310 ppm were noted at a similar depth in PB-7 within the gravel lens with increased fines content. Also near this depth at PB-6, a very slight sheen (but no odor or headspace) was noted; however, a zone with increased fines content was not encountered in this boring location until about 28 feet bgs. Evidence of a slight petroleum odor and headspace reading of 60 ppm were also noted in PB-7 at about 2 feet bgs. No other indications of potential contamination were observed. Soil cuttings were containerized into one labeled drum and disposed of offsite by Safety Kleen.

Based on this evaluation of the data, it was concluded that the headspace readings were not related to the ROD COCs of the Site or the goals of the targeted source area investigation.

4.0 Lower Aquifer cVOC Plume Delineation

An offsite groundwater investigation was conducted north of the Site to evaluate the extent of the chlorinated volatile organic compound (cVOC) plume in the lower aquifer. These borings were requested by the MPCA in a meeting on February 5, 2007. The purpose of these borings was to determine if migration of cVOCs had occurred to the north of the site based on historic concentrations in samples from EM-24D.

4.1 Lower Aquifer Plume Delineation Field Activities

Soil characterization and groundwater sample collection was conducted at four locations north of the Site to characterize soil conditions and collect groundwater samples from the lower aquifer. Field activities occurred between July 21st and August 4th, 2008. Soil boring and temporary well installation services were provided by Matrix, and laboratory analytical services were provided by Pace.

4.1.1 Direct Push Boring Installation

Four direct push borings (PB-1, PB-2, PB-3 and PB-4; Figure 3) were installed to characterize the geology and determine the target depths for groundwater sampling. The soil characterization borings were advanced to depths of up to 62 feet bgs, depending on drilling conditions and geology. Soil was continuously sampled in the soil characterization borings and field screened as described in Section 3.1. In three of the four boreholes (PB-1, PB-2, and PB-3), a dense clay layer and/or the presence of large gravel, cobbles or possibly boulders prevented the boring from reaching the bottom of the lower aquifer. Therefore, at each of these boring locations, one or more additional borings were installed about 5 to 10 feet from the initial boring for groundwater sample collection.

4.1.2 Groundwater Sample Collection

Groundwater samples were generally collected every five feet vertically within the lower aquifer until refusal was encountered or the base of the aquifer was intercepted, as requested by the MPCA. Samples were collected from borings installed near the soil characterization borings (PB-1 to PB-4; Table 3). Sample collection depths are shown on the cross sections on Figures 4 and 5. The base of the lower aquifer was determined by one of two ways: documentation of its presence in the adjacent boring where geology was characterized or interception of an interval that could not produce useable quantities of groundwater. Based on the drilling conditions and geology encountered, groundwater samples were collected at the following depths:

- PB-1: Groundwater samples were collected at PB-1 from four depth intervals covering 44 to 73 feet bgs. A groundwater sample collection attempt between 72 and 73 feet bgs encountered slower groundwater recovery and purge water exhibiting higher fines content. This change in conditions suggested that an underlying low-permeability (silty or clay) unit had been intercepted, and a sample was not analyzed from this depth. Receipt of the selected samples submitted for analysis at the laboratory indicated inadequate preservation and temperature upon arrival at the lab, so an additional boring (PB-1a) was installed and two additional groundwater samples were collected from similar depths to confirm the results from PB-1.
- PB-2: Evidence of the lower aquifer was not encountered above refusal at boring location PB-2. Therefore, one groundwater sample was collected from a sand seam located at approximately 43 feet bgs, at a depth comparable to the observed depth of the lower aquifer in other borings.
- PB-3: Groundwater samples were collected from four depths intervals in the lower aquifer ranging from about 41 to 63 feet bgs. Refusal was encountered in the groundwater sample collection boring beyond this depth.
- PB-4: One groundwater sample was collected from 39 to 43 feet bgs due to the limited thickness of the lower aquifer and the slow recharge rate encountered during a sample collection attempt near the inferred base of the lower aquifer at this location.

Groundwater samples were collected by pushing a hollow steel rod with a sheathed stainless steel screen on the end (groundwater sampler) to the desired sampling depth, where the sheath was raised between one and four feet to expose the screen. Due to difficult drilling conditions at PB-2, a PVC screen inside of the dual tube outer casing was used to collect groundwater instead of the smaller diameter groundwater sampler. The groundwater samples were collected for laboratory analysis through new tubing at each location using a check valve placed within the screened interval.

Groundwater (approximately 1 liter or more) was purged from each boring prior to sampling. All sampling and downhole equipment was decontaminated prior to use and before sample collection. A field blank was collected by pouring distilled water over the decontaminated stainless steel screen. Purge water and decontamination water was containerized, with the exception of PB-3, where some water was discharged to the ground surface due to a crack in the decontamination tub. All soil cuttings were also containerized. Braun Intertec was responsible for disposal of the investigation derived soil and groundwater after analysis. The soil was disposed of offsite by Safety Kleen.

Fourteen primary groundwater samples, one duplicate and one field blank were submitted to Pace and analyzed for the VOCs listed in Table 3.

4.2 Lower Aquifer Hydrogeology

The lower aquifer, where present, is generally characterized as sand to gravel sized sediment with minor amounts of silt, below a clay confining unit. The plume delineation investigation area is located north of the site as shown on Figure 3. Boring logs, included in Appendix B, show the lower aquifer ranging in thickness from thirty feet or more feet in the southern plume delineation borings (PB-3 and PB-1) to 6 feet in a northern plume delineation boring (PB-4).

The lower aquifer did not appear to be encountered at boring PB-2, in the northeast quadrant of the plume delineation area. This boring was drilled to refusal in clay at a depth of approximately 52 feet bgs. One of two likely conclusions can be drawn from this: (1) the lower aquifer is not present at this location, or (2) the lower aquifer may have tapered out to the thickness of the thin sand seam encountered at about 41.5 to 42 feet. Excluding boring location PB-2, the confining unit above the aquifer ranges in thickness from approximately 15 feet to 24 feet. Generalized cross-sections tying the information from these borings with previous borings to the south are included on Figures 4 and 5. As shown in the cross sections and boring logs, the lower aquifer and confining unit characteristics in the plume delineation borings are similar to those observed in historical borings south of the plume delineation area (Barr, 1987). Therefore, the geology does not indicate a preferred pathway for contaminants to migrate to the north.

4.3 Lower Aquifer Plume Delineation

Field screening results are included in the boring logs in Appendix B. The only headspace readings above 10 ppm were identified in PB-3 in soils screened from the lower aquifer. Headspace readings in the lower aquifer ranged from 7.9 to 28.1 ppm, with the highest reading of 28.1 at 56.5 to 59 feet bgs. Boring locations PB-1, PB-2, and PB-4 did not indicate significant field indications of contaminants.

Groundwater analytical results were compared to the MPCA Health Risk Limits (HRLs). TCE was detected at concentrations that exceed its HRL of 5 µg/L in samples collected from PB-3 at 41-44 feet bgs at 51.6 ppb, 46-49 feet bgs at 48.6 ppb, 51-54 feet bgs at 24.2 ppb, and non-detect (<2.0 ppb) at 62-62 feet. No other contaminants were detected above HRLs. Cis 1,2-DCE was detected well below the 70 ppb HRL in PB-3 at 5.5 ppb, 5.8 ppb, 3.3 ppb and non-detect at the respective depths. PCE was not detected in any groundwater samples from PB-3. Chloromethane was detected in all the plume delineation area boring groundwater samples, but there is no HRL for chloromethane. In addition, as shown in Appendix C, chloromethane was also detected in the field blank at a

concentration of 1.9 µg/L. All groundwater sample results for chloromethane were within five times the field blank sample concentration, indicating that the groundwater sample results for chloromethane should be considered false positive concentrations and are not representative of actual groundwater quality.

4.4 Other Site Information

The historical presence of a lawn watering well screened in the lower aquifer has been documented north of the Site (shown on Figure 3). Groundwater samples collected from the “lawn well” from 1987 – 1989 indicated detected concentrations of TCE and 1,2 DCE less than HRLs. During the 2008 investigation, this well was observed to be present and apparently operational as hoses were observed connected to the well. Pumping rates of this well are currently unknown.

4.5 Lower Plume Delineation Investigation Results

As discussed above, groundwater samples were non-detect for the parameters analyzed in borings PB-1A, PB-1, PB-2, and PB-4. The parameters that were detected in PB-3 are lower in concentration levels and similar to those in the groundwater samples collected from EM-24D (TCE and 1,2 DCE) with similar ratios. PCE was not detected in either of these locations. The property owner directly north of the investigation borings (Grainger) denied Barr access to that property for boring locations. Based on the location of PB-4 and PB-2 to the north of well EM-24D and PB-3 without detections of Site COCs, and that the deep groundwater gradient is to the east-southeast, it is likely that contaminants are not migrating north past EM-24D and PB-3. Therefore, it is assumed that the plume is delineated to the north.

5.0 2008 Annual Groundwater Monitoring Report

Annual groundwater sampling was performed on August 22, 2008. Monitoring well locations are shown on Figure 6.

5.1 Monitoring Well Repairs

Wells EM-8S and EM-10S were repaired as proposed in the 2007 Annual Monitoring Report (Barr, 2008). EM-8S had been damaged after reportedly being struck by a vehicle – the protective casing and riser were bent. EM-8S was sampled prior to and during 2006, and not sampled in 2007. A disposable bailer was stuck in EM-10S. EM-10S had been sampled prior to and during 2005, and not sampled in 2006 or 2007. Repairs were made to the two wells by Mark J. Traut Wells, Inc. on July 15 and 16, 2008. EM-8S was repaired and EM-10S was re-drilled. Both wells were resurveyed by Braun Intertec relative to a local datum.

5.2 Groundwater Elevation Data

Depth to groundwater was measured on August 21 and 22, 2008 at EM-4S, EM-8S, EM-8D, EM-9S, EM-9M, EM-10S, EM-22D, EM-24D, EM-40D, EM-40S, and NW-2D as summarized in Table 4. No measurable water was present at EM-9S. Depth to groundwater measurements were resumed at EM-8S and EM-10S for the 2008 sampling/monitoring event, following their repair and resurvey in July 2008. A depth to groundwater measurement at PW-1 was inadvertently omitted during the August 2008 monitoring event. Groundwater level measuring at PW-1 is included as part of the 2009 monitoring plan (see below). Groundwater elevation monitoring is completed by Braun Intertec.

Shallow and deep aquifer groundwater elevation contour maps are presented in Figures 7 and 8, respectively. Well casing elevation data for Minnesota Pollution Control Agency (MPCA) well NW-2D was not available. The MPCA was contacted and was not able to retrieve the elevation data for this well. Therefore, the ground surface elevation for NW-2D was estimated using general topographic information for the area and a riser 2 feet above grade was assumed.

Half of the monitored wells had higher groundwater elevations for 2008 as compared to 2007, and half had lower elevations. However, groundwater elevations at the Site remain low when compared to historical data (Figure 9). For half of the monitored wells, groundwater elevations are at the lowest value since those measured in 1998: EM-8D, EM-9M, EM-22D, and EM-24D. Compared to 2007, groundwater elevations for 2008 were higher at EM-4S, EM-40S, EM-40D, and NW-2D. Flow

directions appear to be consistent with those historically observed for periods when the Waite Park municipal wells were operating and no groundwater pumping was occurring at the site.

The groundwater elevation calculated for EM-8S was not used in contouring the shallow groundwater elevations. Historically, there has been an approximate 1-foot difference in elevation from EM-9S / EM-10S to EM-8S, as compared to a nearly 5-foot difference in 2008. (The difference in groundwater elevations calculated for EM-8S from 2006 to 2008 is a decrease of approximately 3.5 feet.) EM-8S had been repaired and resurveyed shortly before the 2008 monitoring event. The groundwater elevation data for EM-8S will be evaluated following the 2009 monitoring event. EM-8S may be resurveyed, if necessary.

5.3 Groundwater Sample Collection

Annual groundwater sampling on the Site was completed by Braun Intertec on August 22, 2008. Groundwater samples were collected from wells EM-4S, EM-8S (repaired July 2008), EM-8D, EM-9M, EM-22D, EM-24D, and NW-2D on August 22, 2008. A sample was not collected from EM-9S because no measurable water was present.

5.4 Groundwater Quality Results

Groundwater analytical data from the 2008 sampling event is summarized in Table 5. The Braun Intertec field data reports are presented in Appendix D. The Braun Intertec laboratory report is included in Appendix E. Monitoring parameters included chlorinated volatile organic compounds (VOCs) with the primary contaminants of concern (COCs) being: tetrachloroethylene (PCE); 1,1,2-trichloroethene (TCE); 1,1-dichloroethane; cis- and trans-1,2-dichloroethene (DCE); and 1,1,1-trichloroethane (TCA). A parameter that has been detected, but historically has not been included in the list of COCs for this Site is 1,1-dichloroethylene. Discussion of 1,1-dichloroethylene is included below for those wells where the parameter was detected in 2008. As discussed in the 2007 Annual Monitoring Report, which was approved by the MPCA, 1,4-dioxane was removed from the list of analytes for the 2008 sampling event.

Overall, the groundwater quality data from the on-site monitoring wells continued to improve in 2008. The overall long-term decrease in COC concentrations at the Site is shown on Figures 10 through 16.

Concentrations of COCs decreased or remained stable in all the wells sampled. The volatile organic compounds that, in 2008, exceed MN Health Risk Limits (HRL) at one or more groundwater

sampling locations were cis-1,2DCE; PCE; and TCE. In 2008, the concentration of PCE at EM-8S decreased to less than the HRL and the concentration of TCE at EM-8D decreased to less than the HRL. Concentrations of COCs in the samples from EM-22D remain low compared to historical data (Figure 14), and appear to confirm the dissipation of the remnant aspects of the shallow aquifer plume following cessation of on-site (PW1) pumping in 2001. The concentration of natural attenuation daughter product cis-1,2DCE at EM-22D historically has had an overall declining trend, remaining relatively stable from 2007 to 2008.

Monitoring results from specific wells are summarized below:

Monitoring well EM-4S is located in the southwest area of the site. Concentrations of detected parameters at EM-4S in the 2008 sample were as follows: 1,1-dichloroethane at 3.7 micrograms per liter ($\mu\text{g/L}$); cis-1,2DCE at 1.0 $\mu\text{g/L}$ (less than the HRL of 70 $\mu\text{g/L}$); and PCE at 5.7 $\mu\text{g/L}$ (at slightly above the HRL of 5 $\mu\text{g/L}$). The concentration of TCE at EM-4S decreased from 2.2 $\mu\text{g/L}$ in 2007 to not-detected at or above the method detection limit (MDL) of 1.0 $\mu\text{g/L}$ in the 2008 sample. Historically, concentrations of COCs at EM-4S have decreased and then, since 2002, have remained stable, with an overall decrease in 2008 (Figure 10).

EM-8S was sampled prior to and during 2006, and not sampled in 2007 because of damage to the well. Sampling was resumed at EM-8S in 2008 following repair of this well (see discussion of well repairs, above). Concentrations of COCs in samples from EM-8S have decreased (Figure 11). The concentration of cis-1,2DCE at EM-8S decreased from 170 $\mu\text{g/L}$ in 2006 to 84 $\mu\text{g/L}$ in 2008 (slightly above the HRL of 70 $\mu\text{g/L}$). The concentration of trans-1,2DCE at EM-8S decreased from 4.1 $\mu\text{g/L}$ in 2006 to non-detected at or above the MDL (1.0 $\mu\text{g/L}$) in 2008. The concentration of PCE at EM-8S decreased from 14 $\mu\text{g/L}$ in 2006 to 4.6 $\mu\text{g/L}$ in 2008 (to less than the HRL of 5 $\mu\text{g/L}$). The concentration of TCE at EM-8S decreased from 3.0 $\mu\text{g/L}$ in 2006 to 1.5 $\mu\text{g/L}$ in 2008. The Sum Volatile Organics concentration at EM-8S decreased from 190 $\mu\text{g/L}$ in 2006 to 90 $\mu\text{g/L}$ in 2008 (over 100% decrease).

Concentrations of COCs in samples from EM-8D have generally remained stable (Figure 12). TCE was the only analyzed parameter detected at or above method detection limits in the 2008 sample from EM-8D. The concentration of TCE at EM-8D decreased from 6.2 $\mu\text{g/L}$ in 2007, to 4.4 $\mu\text{g/L}$ in 2008 (to less than the HRL of 5 $\mu\text{g/L}$).

A sample was not collected from EM-9S (located near the former source area next to the building, where the SVE system operated from October 2000 to July 2002) during the 2008 sampling event as there was no measurable water in the well. Prior to initiating the active remediation system in 1988, total COC concentrations in samples from EM-9S ranged from 3 milligrams per liter (mg/L) to 20 mg/L (3,000 to 20,000 µg/L) compared with 12 µg/L in 2005.

The concentrations of sum of VOCs in the sample from well EM-9M decreased from 2007 (400 µg/L) to 2008 (180 µg/L; over 100% decrease); a continuation of an overall declining trend (Figure 13). The concentrations of 1,1-dichloroethane and cis-1,2DCE at EM-9M were somewhat lower, with a slight decrease from 3.5 µg/L and 3.0 µg/L, respectively in 2007; to 2.6 µg/L and 2.1 µg/L, respectively, in 2008. At EM-9M, the concentrations of PCE and TCE decreased from 270 µg/L and 120 µg/L, respectively, in 2007 to 95 µg/L and 82 µg/L in 2008, respectively.

Concentrations of total COCs in the sample from EM-22D generally decreased as compared to 2007, and remain low in comparison to historical data (Figure 14). The concentration of TCA at EM-22D decreased from 9.2 µg/L in 2007 to 3.0 µg/L in 2008 (less than the HRL of 200 µg/L). The concentration of 1,1-dichloroethane at EM-22D decreased from 38 µg/L in 2007 to 11 µg/L in 2008. The concentration of 1,1-dichloroethylene decreased from 4.4 µg/L in 2007 to 1.2 µg/L in 2008 (less than the HRL of 6 µg/L). The concentration of natural attenuation daughter product cis-1,2DCE at EM-22D remained stable at 41 µg/L in 2008, compared with 43 µg/L in 2007 (less than the HRL of 70 µg/L). The concentration of trans-1,2DCE at EM-22D decreased slightly from 3.3 µg/L in 2007 to 1.6 µg/L in 2008 (significantly less than the HRL of 100 µg/L). PCE and TCE concentrations have decreased from the 2007 concentrations of 36 µg/L and 47 µg/L, respectively, to 2008 concentrations of 28 µg/L and 29 µg/L, respectively (greater than the HRLs of 5 µg/L for each). From 2007 to 2008, total COC concentrations at EM-22D decreased from 180 µg/L to 110 µg/L.

Water quality data from well EM-24D, located near the northern property boundary indicated somewhat lower concentrations of COCs as compared to 2007 and to historical data (Figure 15). The concentrations of cis-1,2DCE and trans-1,2DCE at EM-24D decreased slightly at 7.3 µg/L and 1.0 µg/L, respectively, in 2008; compared to 11 µg/L and 1.4 µg/L, respectively, in 2007 (significantly less than the HRLs of 70 µg/L and 100 µg/L, respectively). The concentration of TCE at EM-24D was 85 µg/L in 2008, as compared to 94 µg/L in 2007.

Samples collected from downgradient off-site well NW-2D, which is the closest monitoring well to the municipal well field, had concentrations of 1,1-dichloroethane and 1,1-dichloroethylene from 10 µg/L (duplicate sample) and 1.8 µg/L (duplicate), respectively, in 2007 to 7.9 µg/L and 1.4 µg/L, respectively, in 2008 (less than the HRL of 6 µg/L). The concentration of cis-1,2DCE decreased slightly from 6.3 µg/L (duplicate) in 2007 to 4.6 µg/L in 2008 (significantly less than the HRL of 70 µg/L). The concentrations of PCE and TCE were similar at 39 µg/L and 22 µg/L, respectively, in 2008 as compared to 37 µg/L (duplicate) and 22 µg/L, respectively, in 2007 (greater than the HRLs of 5 µg/L for each). Figure 16 is a graph of historical analytical data for NW-2D.

Overall, the plume appears to be continuing to dissipate, with some continued natural attenuation as evident from the presence of the daughter products cis- and trans-1,2 DCE in samples from well EM-22D as shown in Figure 14. To evaluate the changes in total quantity of COCs in the samples from EM-8S and EM-22D, the molar concentrations were calculated and are displayed graphically on Figure 17 and Figure 18. The total number of micromoles per liter decreased in EM-8S and EM-22D, indicating that natural attenuation is occurring.

5.5 Waite Park Water Treatment System

A discussion of the results of the sampling conducted by the City of Waite Park at their treatment system will be submitted under separate cover after the 2008 data has been compiled and transmitted by the City. Table 6 and Figures 20 and 21 will be updated and City of Waite Park well pumping data will be presented. Depending on the City's schedule, this additional data should be submitted by the end of February, 2008.

5.6 2009 Monitoring Activities

- Groundwater elevation data will be collected annually from wells EM-4S, EM-8S, EM-8D, EM-9S, EM-9M, EM-10S, EM-22D, EM-24D, EM-40S, EM-40D, NW-2D and PW-1.
- Groundwater samples will be collected annually from wells EM-4S, EM-8S, EM-8D, EM-9S, EM-9M, EM-22D, EM-24D, and NW-2D.
- The next scheduled annual sampling event is scheduled for fall 2009 and the 2009 annual monitoring report should be available to the MPCA for review on or before January 31, 2010.

6.0 Conclusions and Recommendations

Investigation results and recommendations include the following:

- Soil gas sampling results were all below MN OSHA permissible exposure limits, but results for several chlorinated VOCs and benzene were above MPCA ISVs. The highest concentrations were identified near the former SVE pump-out well and at two locations near the Grede building, where PCE and TCE results were above 100 times ISVs. As discussed in Section 2.3, it is recommended to conduct a Tier 3 vapor intrusion evaluation that will consist of a building inspection and air quality survey.
- Source area sampling confirmed the lack of a continuing cVOC source associated with the targeted COCs at the locations investigated. No further investigation or remedial actions are recommended.
- Groundwater samples collected from the lower aquifer indicated that the groundwater plume extends past the Site but has been defined in the northern direction. Since the groundwater plume extent has been defined in the downgradient direction, no further investigation or remedial actions are recommended.
- It is recommended that the property owner using the lawn watering well be notified of the groundwater conditions beneath their property and be advised to discontinue use and complete abandonment of the lawn watering well.
- Annual groundwater monitoring at the Site indicates that groundwater quality continued to improve in 2008 and overall VOC concentrations are decreasing over time and natural attenuation is occurring. Detailed recommendations for 2009 groundwater monitoring are discussed in Section 5.7. Results of the groundwater monitoring and additional plume delineation borings are shown on Figure 19.

6.1 Path Forward

The results of the investigation indicate that further work needs to be completed for the vapor intrusion pathway including building survey and air quality survey. However, investigation to the north of the Site and in the source area is currently complete.

7.0 References

Barr Engineering Company (Barr), 1987. *Remedial Investigation Report, Electric Machinery Site, St. Cloud, Minnesota*. Prepared for BBT Inc. and Cooper Industries. May, 1987.

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Barr, 2008. *2007 Annual Groundwater Monitoring Report*. Electric Machinery Site, St. Cloud, Minnesota. Prepared for ABB Inc. and Cooper Industries. January, 2007.

Minnesota Pollution Control Agency (MPCA), 2008a. *Risk-Based Guidance for the Vapor Intrusion Pathway*. Superfund RCRA and Voluntary Cleanup Section. September, 2008.

MPCA, 2008b. *Background Information on Intrusion Screening Values*. Superfund RCRA and Voluntary Cleanup Section document# c-s4-08. September, 2008.

Tables

Table 1
Soil Gas Analytical Results
Former Electric Machinery Site
St. Cloud, Minnesota
(concentrations in ug/m3)

Location	MPCA Intrusion Screening Values (3)	MPCA 10X Intrusion Screening Values	MPCA 100X Intrusion Screening Values	MN TWA - Limits for Air Contaminants	MN STEL - Limits for Air Contaminants	MN CEILING - Limits for Air Contaminants	R-1 3-4' 7/24/2008 PACE	R-2 3-4' 7/24/2008 PACE	R-3 3-4' 7/24/2008 PACE	R-4A 3'-4' 7/25/2008 PACE	WC-1 7' 7/24/2008 PACE	WC-1 11' 7/24/2008 PACE	WC-1 17' 7/24/2008 PACE
Date	9/1/2008	9/1/2008	9/1/2008	11/23/1992	11/23/1992	11/23/1992							
Lab													
Exceedance Key	Bold	<u>Underline</u>	Box	No Exceedances	No Exceedances	No Criteria							
VOCs													
1,1,1-Trichloroethane	1000	10000	100000	1900000	2450000	--	31.8	119	5430	27.4	138	158	216
1,1-Dichloroethane	500	5000	50000	400000	--	--	<1.2	<1.3	<1.2	<1.3	<1.1	5.4	13.4
1,1-Dichloroethylene	200	2000	20000	4000	--	--	<1.2	<1.3	<1.2	<1.3	<1.1	<1.2	7.2
1,2-Dichloroethane	0.4	4	40	--	--	--	<1.2	<1.3	<1.2	<1.3	<1.1	<1.2	<1.3
1,2-Dichloroethylene, cis	40	400	4000	--	--	--	<1.2	<1.3	16.3	<1.3	181	247	1160
1,2-Dichloroethylene, trans	60	600	6000	--	--	--	<1.2	<1.3	<1.2	<1.3	12.9	18.1	23.7
Benzene	4.5	45	450	3200 (1)	--	--	8.1	15.7	20.7	1.6	12.1	7.6	72.8
Chloroform	100	1000	10000	9780	--	--	<1.5	<1.6	<1.5	<1.6	<1.4	<1.5	6.8
Chloromethane	6	600	6000	105000	210000	--	<0.62	<0.67	<0.62	<0.67	<0.58	<0.62	<0.65
Tetrachloroethylene	20	200	2000	170000	--	--	517	9530	74100	766	22600	18000	52100
Trichloroethylene	3	30	300	270000	1080000	--	37.9	642	395	8.2	1830	1710	4920
Vinyl chloride	1	10	100	2600 (2)	--	--	<0.77	<0.83	<0.77	<0.83	<0.72	<0.77	<0.80

-- No criteria.

(1) Value obtained from OSHA rule 1910.1028.

(2) Value obtained from OSHA rule 1910.1017.

(3) MPCA Superfund RCRA and Voluntary Cleanup Section

Risk-Based Guidance for the Vapor Intrusion Pathway, September 2008.

Table 2
Soil Analytical Results
Former Electric Machinery Site
St. Cloud, Minnesota
(concentrations in mg/kg)

Location	PB-5 20-24'
Date	7/24/2008
Lab	PACE
1,1,1-Trichloroethane	<0.218
1,1-Dichloroethane	<0.218
1,1-Dichloroethylene	<0.218
1,2-Dichloroethane	<0.218
1,2-Dichloroethylene, cis	<0.218
1,2-Dichloroethylene, trans	<0.218
1,4-Dioxane	<4.35
Benzene	<0.0544
Chloroform	<0.218
Chloromethane	<0.218
Tetrachloroethylene	<0.218
Trichloroethylene	<0.218
Vinyl chloride	<0.0544
Sum Volatile Organics	ND

ND Not detected.

Table 3
Soil Probe Groundwater Analytical Results
Former Electric Machinery Site
St. Cloud, Minnesota
(concentrations in ug/L)

Location	MN Health Risk Limits	PB-1 44-47' 8/1/2008 PACE	PB-1 49-52' 8/1/2008 PACE	PB-1 54-57' 8/1/2008 PACE	PB-1a 54-57' 8/4/2008 PACE	PB-1a 54-57' 8/4/2008 PACE DUP	PB-1 59-62' 8/1/2008 PACE	PB-1 64-67' 8/1/2008 PACE	PB-1a 64-67' 8/4/2008 PACE
Exceedance Key	Bold								
1,1,1-Trichloroethane	200	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0
1,1-Dichloroethane	70	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0
1,1-Dichloroethylene	6	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0
1,2-Dichloroethane	4	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0
1,2-Dichloroethylene, cis	70	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0
1,2-Dichloroethylene, trans	100	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0
1,4-Dioxane	--	<80.0	<80.0	<80.0	<80.0	<80.0	<160	<80.0	<80.0
Benzene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0
Chloroform	60	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0
Chloromethane	--	1.4	2.1	4.1	<1.0	4.9	5.3	5.0	3.3
Tetrachloroethylene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0
Trichloroethylene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0
Vinyl chloride	0.2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.40
Sum Volatile Organics	--	1.4	2.1	4.1	ND	4.9	5.3	5.0	3.3

DUP Duplicate sample.

-- No criteria.

ND Not detected.

Table 3
Soil Probe Groundwater Analytical Results
Former Electric Machinery Site
St. Cloud, Minnesota
(concentrations in ug/L)

Location	MN Health Risk Limits	PB-1 69-70' 8/1/2008 PACE	PB-2 43' 7/30/2008 PACE	PB-3 41-44' 8/4/2008 PACE	PB-3 46-49' 8/4/2008 PACE	PB-3 51-54' 8/4/2008 PACE	PB-3 62-63' bottom 8/4/2008 PACE	PB-4 39-43' 7/28/2008 PACE
Exceedance Key	Bold							
1,1,1-Trichloroethane	200	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0
1,1-Dichloroethane	70	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0
1,1-Dichloroethylene	6	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0
1,2-Dichloroethane	4	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0
1,2-Dichloroethylene, cis	70	<1.0	<2.0	5.5	5.8	3.3	<2.0	<1.0
1,2-Dichloroethylene, trans	100	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0
1,4-Dioxane	--	<80.0	<160	<80.0	<80.0	<80.0	<160	<80.0
Benzene	5	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0
Chloroform	60	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0
Chloromethane	--	1.2	3.1	1.1	2.2	2.4	4.4	1.3
Tetrachloroethylene	5	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0
Trichloroethylene	5	<1.0	<2.0	51.6	48.6	24.2	<2.0	<1.0
Vinyl chloride	0.2	<0.40	<0.80	<0.40	<0.40	<0.40	<0.80	<0.40
Sum Volatile Organics	--	1.2	3.1	58	57	30	4.4	1.3

DUP Duplicate sample.

-- No criteria.

ND Not detected.

Table 4
2008 Groundwater Elevations
Former Electric Machinery Site
(concentrations in ft./MSL)

Location	Date	Water Elevation
EM4S	08/22/2008	1033.11
EM8D	08/22/2008	1023.46
EM8S	08/22/2008	1023.84
EM9M	08/22/2008	1024.98
EM9S	08/21/2008	DRY
EM10S	08/21/2008	1028.93
EM22D	08/22/2008	1022.49
EM24D	08/22/2008	1024.71
EM40D	08/21/2008	1032.23
EM40S	08/21/2008	1033.09
NW2D	08/22/2008	1022.19 *

* Survey information not available. Elevation of top of riser estimated.

DRY No water present in well.

Table 5
2008 Groundwater Monitoring Well Analytical Data
Former Electric Machinery Site
(concentrations in ug/L)

Location Date Dup	MN Health Risk Limits 8/27/2007	EM4S 8/22/2008	EM8D 8/22/2008	EM8S 8/22/2008	EM9M 8/22/2008	EM22D 8/22/2008	EM22D 8/22/2008	EM24D 8/22/2008	NW2D 8/22/2008
Exceedance Key	Bold								
VOCs									
1,1,1,2-Tetrachloroethane	70	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	200	<1.0	<1.0	<1.0	<1.0	3.0	3.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloro-1-propene	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
1,1-Dichloroethane	70	3.7	<1.0	<1.0	2.6	11	11	<1.0	7.9
1,1-Dichloroethylene	6	<1.0	<1.0	<1.0	<1.0	1.2	1.1	<1.0	1.4
1,2,3-Trichlorobenzene	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-Trichloropropane	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trimethylbenzene	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
1,2-Dibromo-3-chloropropane	--	<10	<10	<10	<10	<10	<10	<10	<10
1,2-Dibromoethane	0.004	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	600	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane	4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethylene, cis	70	1.0	<1.0	84	2.1	40	41	7.3	4.6
1,2-Dichloroethylene, trans	100	<1.0	<1.0	<1.0	<1.0	1.6	1.6	1.0	<1.0
1,2-Dichloropropane	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-Trimethylbenzene	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
1,3-Dichloro-1-propene trans	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichloro-1-propene, cis	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichlorobenzene	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichloropropane	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2,2-Dichloropropane	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Acetone	700	<15	<15	<15	<15	<15	<15	<15	<15
Allyl chloride	30	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Benzene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromobenzene	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromochloromethane	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromodichloromethane	6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	40	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Bromomethane	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Butyl benzene	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Butylbenzene sec	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Butylbenzene tert-	--	<10	<10	<10	<10	<10	<10	<10	<10
Carbon tetrachloride	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	60	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorotoluene o-	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Chlorotoluene p-	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Cumene (isopropyl benzene)	300	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5

Table 5
2008 Groundwater Monitoring Well Analytical Data
Former Electric Machinery Site
(concentrations in ug/L)

Location Date Dup	MN Health Risk Limits 8/27/2007	EM4S 8/22/2008	EM8D 8/22/2008	EM8S 8/22/2008	EM9M 8/22/2008	EM22D 8/22/2008	EM22D 8/22/2008	EM24D 8/22/2008	NW2D 8/22/2008
Exceedance Key	Bold								
Cymene p- (Toluene isopropyl p-)	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Dibromomethane (methylene bromide)	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorodifluoromethane	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorofluoromethane	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethyl benzene	700	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Ethyl ether	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Hexachlorobutadiene	1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl ethyl ketone	4000	<10	<10	<10	<10	<10	<10	<10	<10
Methyl isobutyl ketone	300	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl tertiary butyl ether (MTBE)	--	<10	<10	<10	<10	<10	<10	<10	<10
Methylene chloride	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene	300	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Propylbenzene	--	<10	<10	<10	<10	<10	<10	<10	<10
Styrene	--	<10	<10	<10	<10	<10	<10	<10	<10
Tetrachloroethylene	5	5.7	<2.0	4.6	95	28	28	<2.0	39
Tetrahydrofuran	--	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene	5	<1.0	4.4	1.5	82	29	29	85	22
Trichlorofluoromethane	2000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorotrifluoroethane	200000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	0.2	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Xylene m & p	10000	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Xylene o-	10000	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Xylenes total	10000	ND	ND	ND	ND	ND	ND	ND	ND
Sum Volatile Organics	--	10.4	4.4	90.1	180	110	110	93	75

DUP Duplicate sample.

-- No criteria.

ND Not detected.

Figures

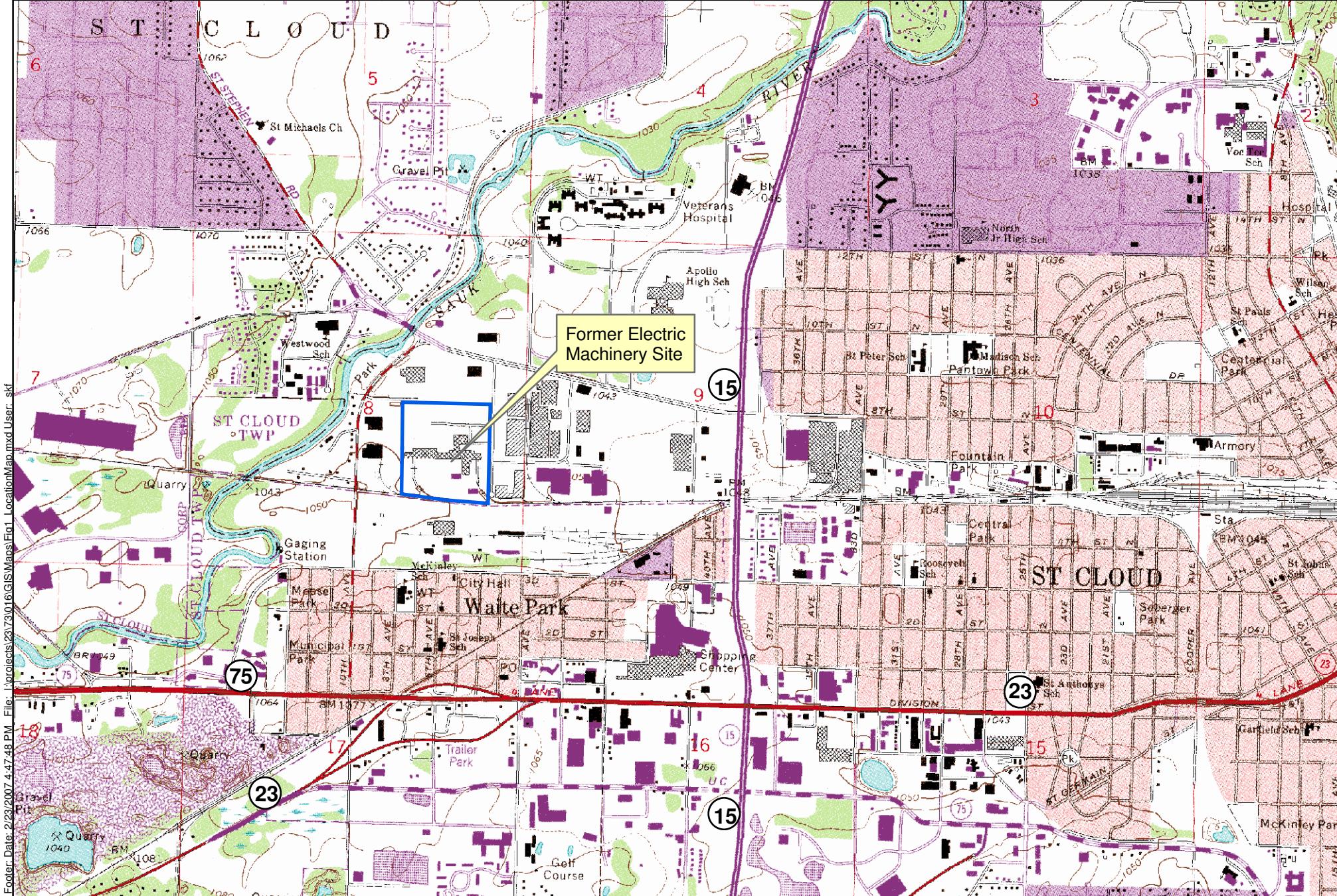
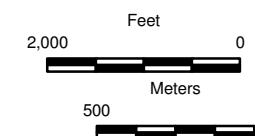
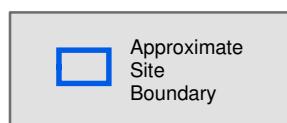


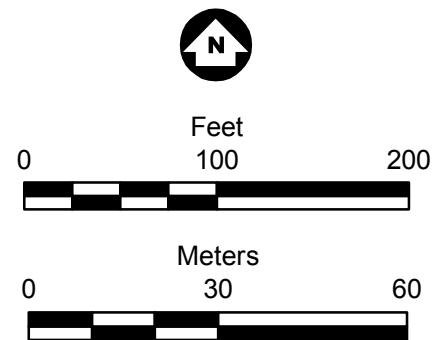
Figure 1



SITE LOCATION
Former Electric Machinery Site
St. Cloud, Minnesota



- Source Area Boring Location
- Soil Vapor Sampling Location
- ⊗ Sealed Well
- EM Monitoring
- ▲ MPCA Monitoring
- Municipal Well Location
- Parcels (Stearns County)



*Note: Building locations are skewed due to angle of aerial photo.
All sample locations are outside of buildings.

Figure 2

SOIL VAPOR/SOURCE AREA
SAMPLING LOCATIONS
Former Electric Machinery Site
Cooper Industries/ABB
St. Cloud, MN

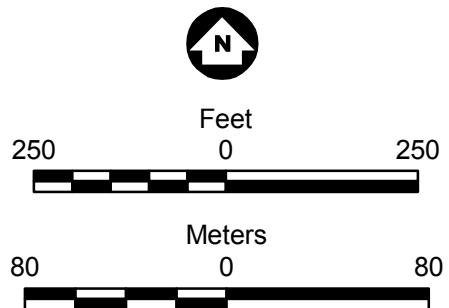
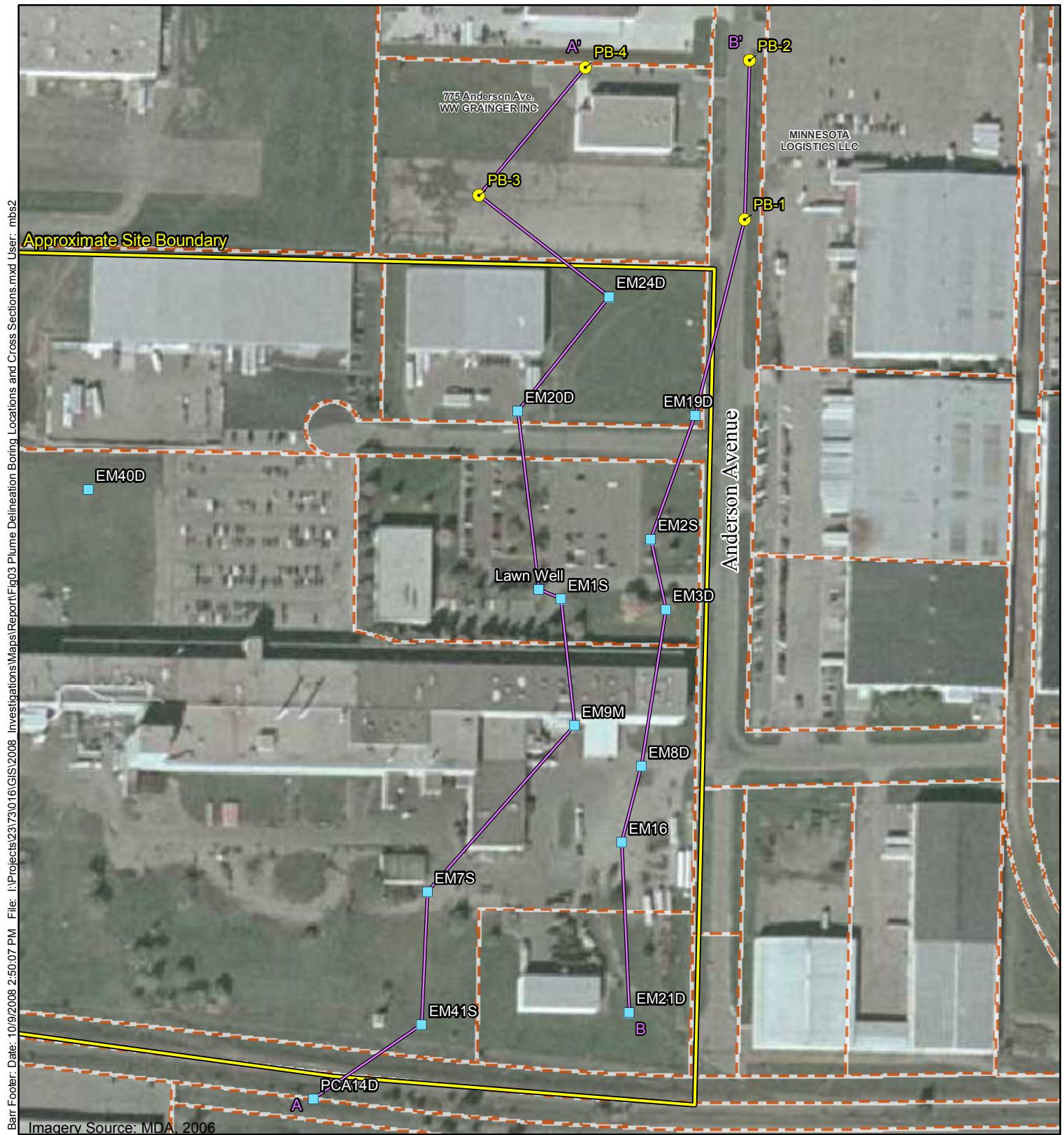


Figure 3
**PLUME DELINEATION
BORINGS AND CROSS-
SECTION LOCATIONS**
Former Electric Machinery Site
Cooper Industries/ABB
St. Cloud, MN

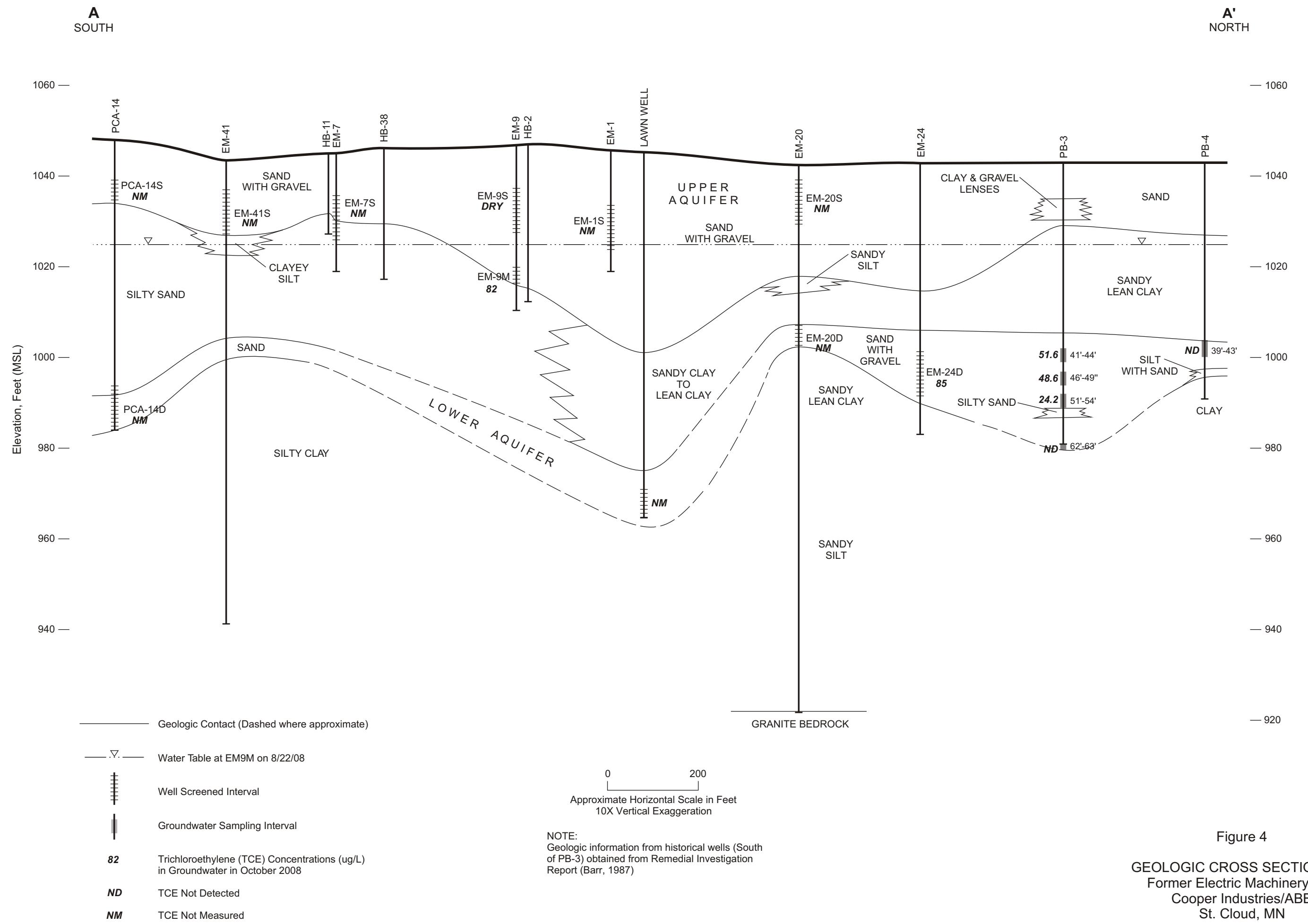


Figure 4

GEOLOGIC CROSS SECTION A-A'
Former Electric Machinery Site
Cooper Industries/ABB
St. Cloud, MN

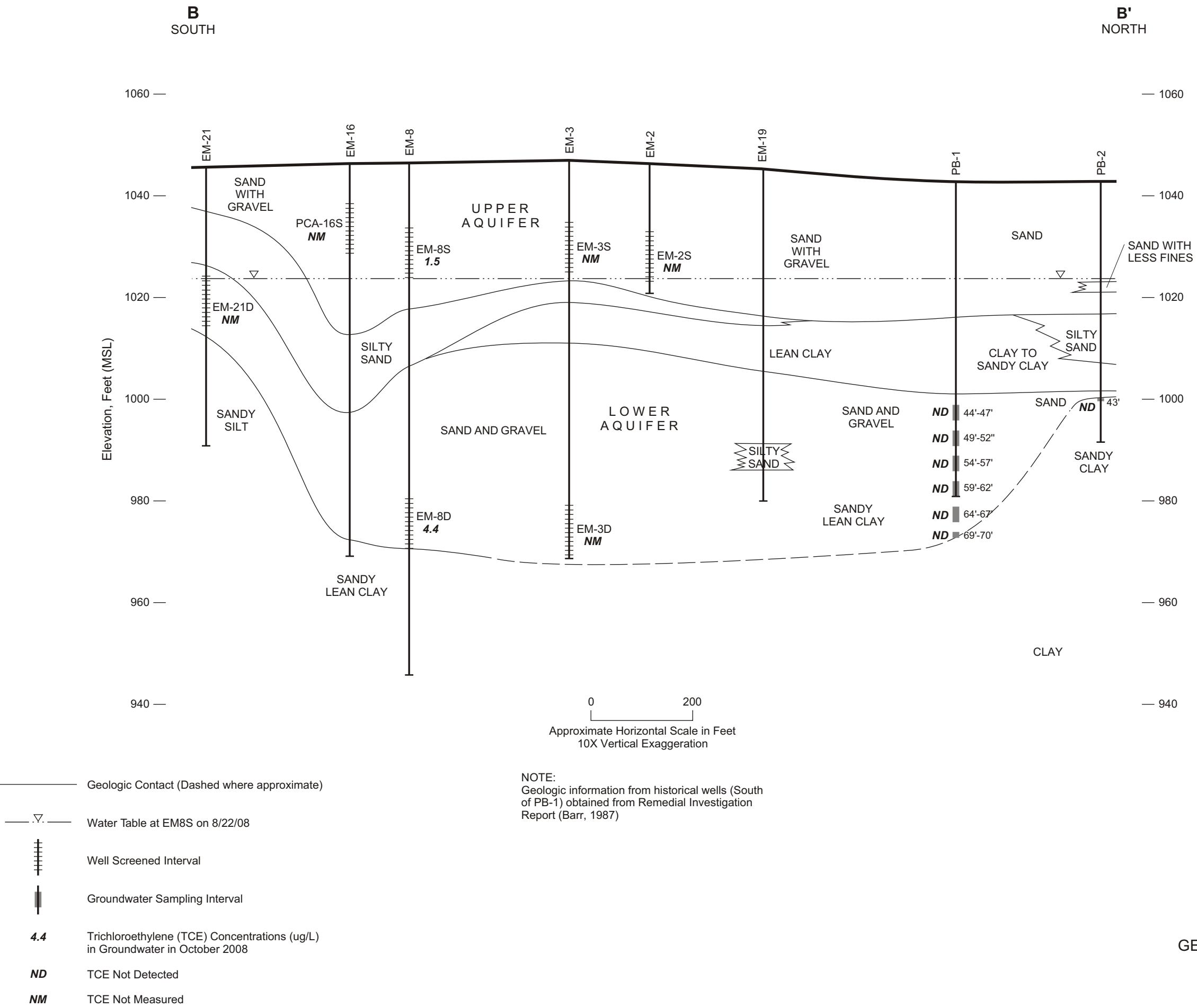


Figure 5

GEOLOGIC CROSS SECTION B-B'
Former Electric Machinery Site
Cooper Industries/ABB
St. Cloud, MN



- Well Status**
- ⊗ Abandoned
- Approximate Property Boundary**

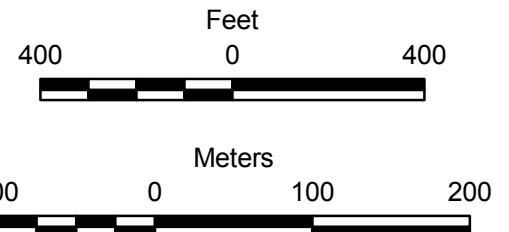


Figure 6

WELL LOCATION MAP
Former Electric Machinery Site
Cooper Industries/ABB
St. Cloud, MN



- Wells**
- EM Monitoring (Yellow square)
 - MPCA Monitoring (Yellow triangle)
- Well Status**
- Sealed (Circle with X)
 - Not Monitored (NM)
- August 2008 Shallow GW Elevation
(Contour Interval = 1 ft.)
- * Data not used in contouring

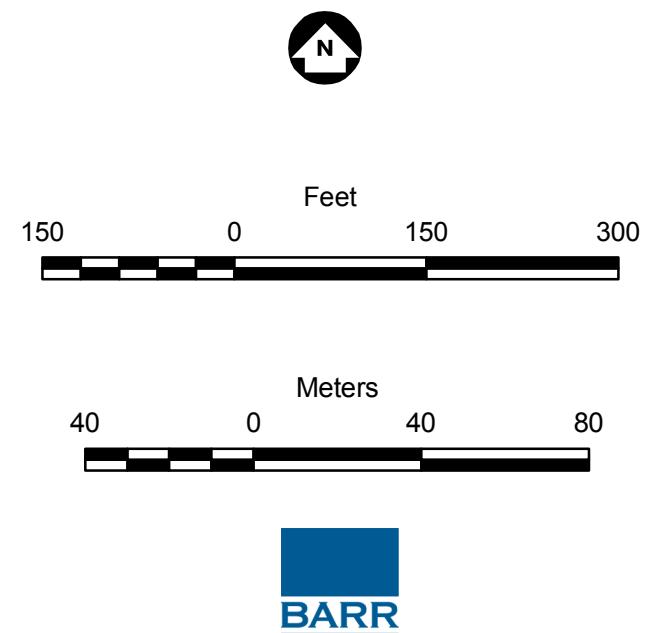


Figure 7

SHALLOW GROUNDWATER ELEVATIONS
AUGUST 2008
Electric Machinery Site
St. Cloud, Minnesota



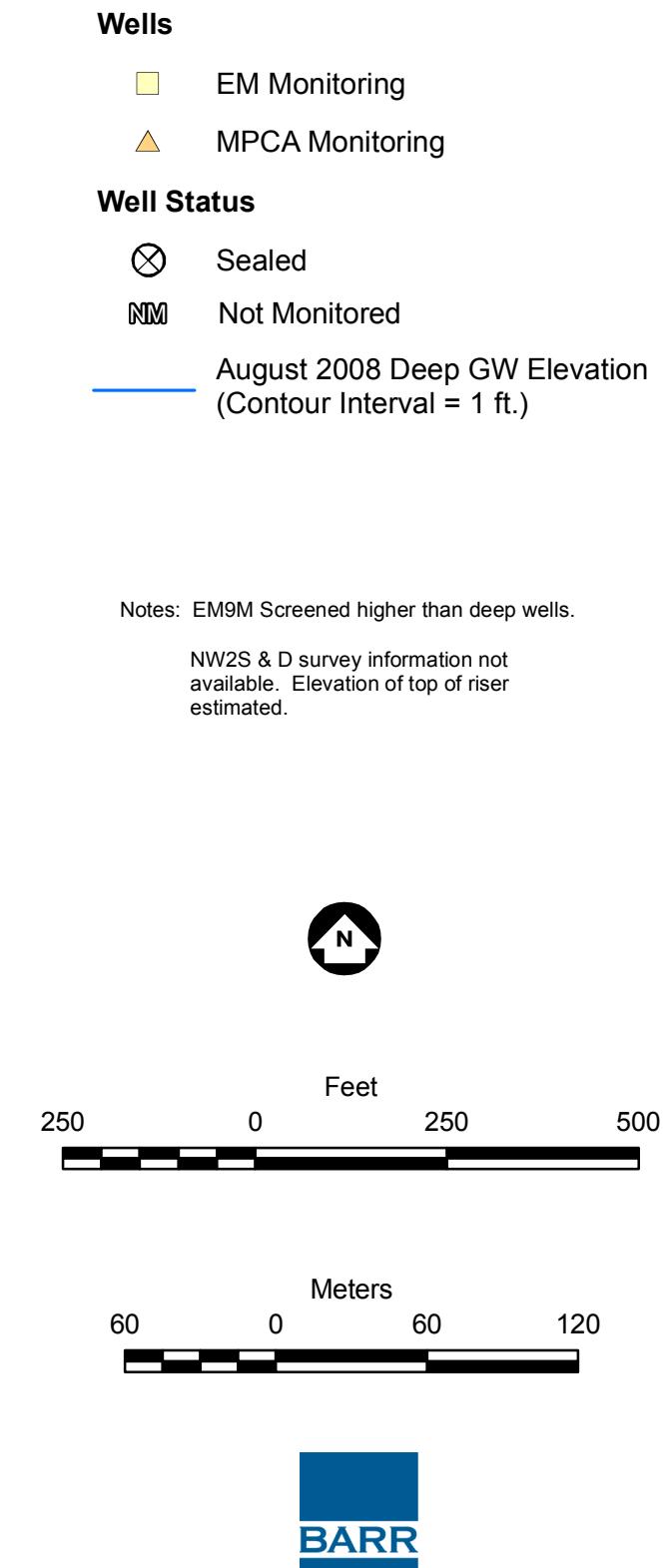


Figure 8

**DEEP GROUNDWATER ELEVATIONS
AUGUST 2008**
Electric Machinery Site
St. Cloud, Minnesota

Figure 9
Water Elevations vs Time
Former Electric Machinery Site

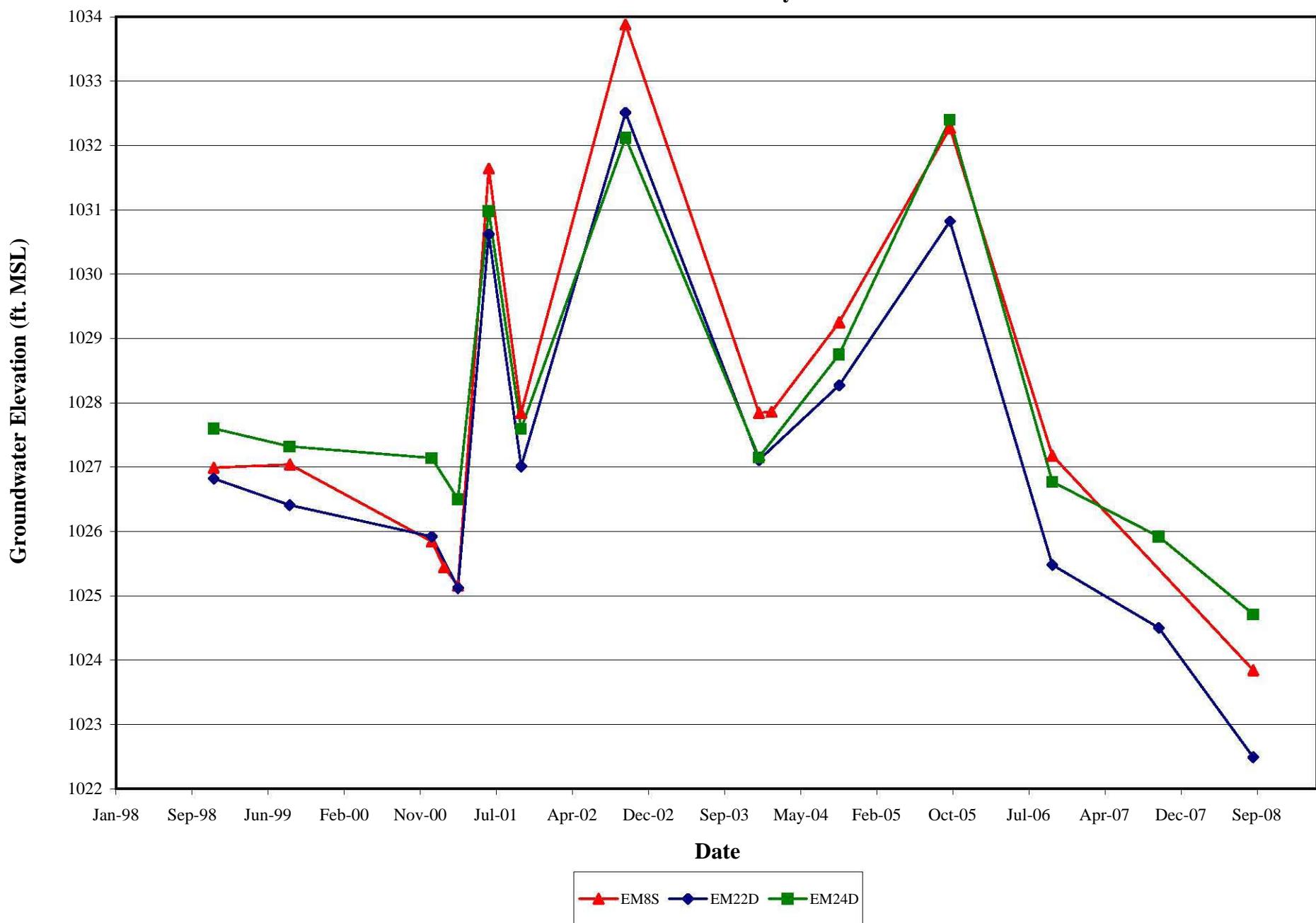


Figure 10
EM4S
VOC Historical Concentrations

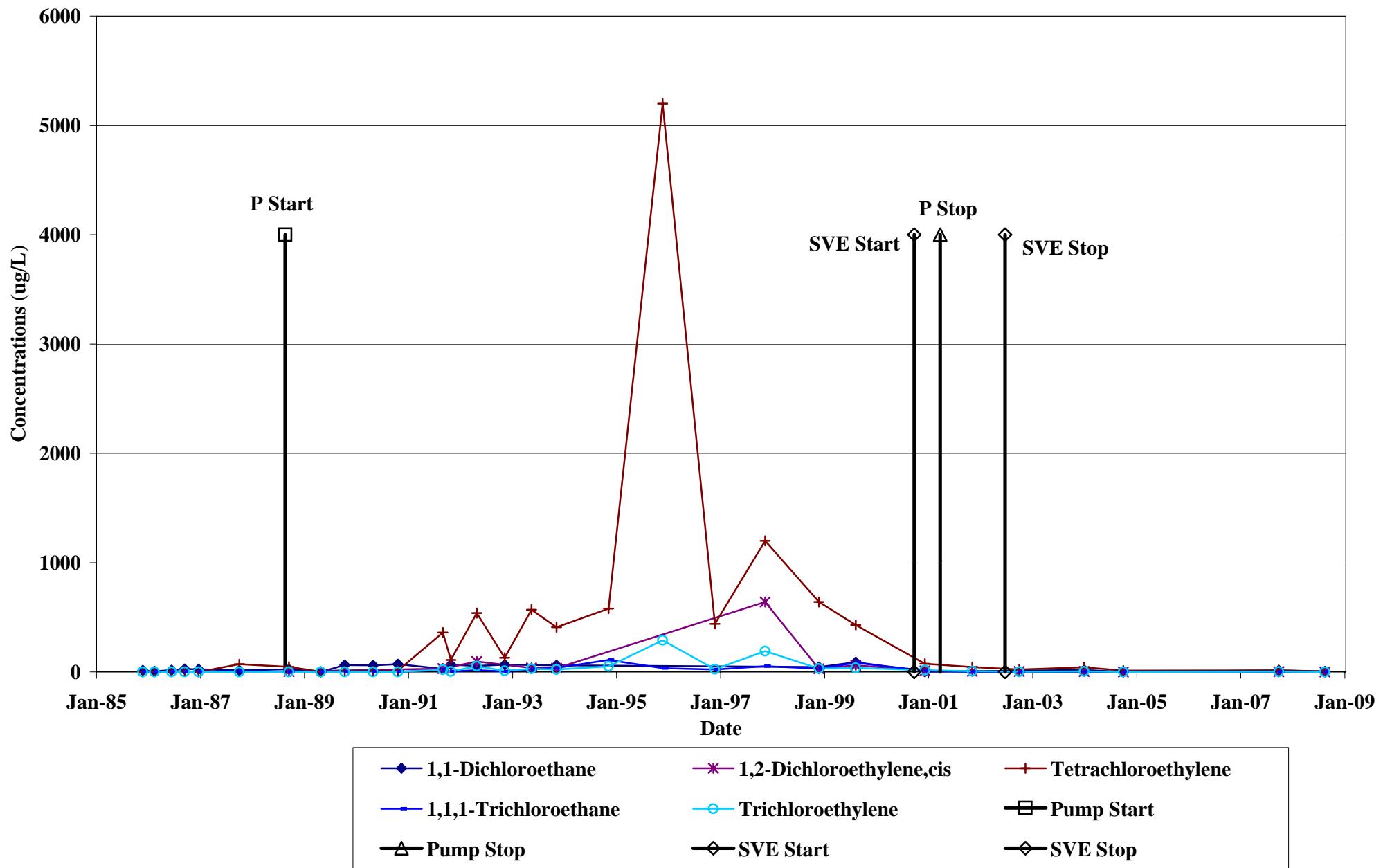


Figure 11
EM8S
VOC Historical Concentrations

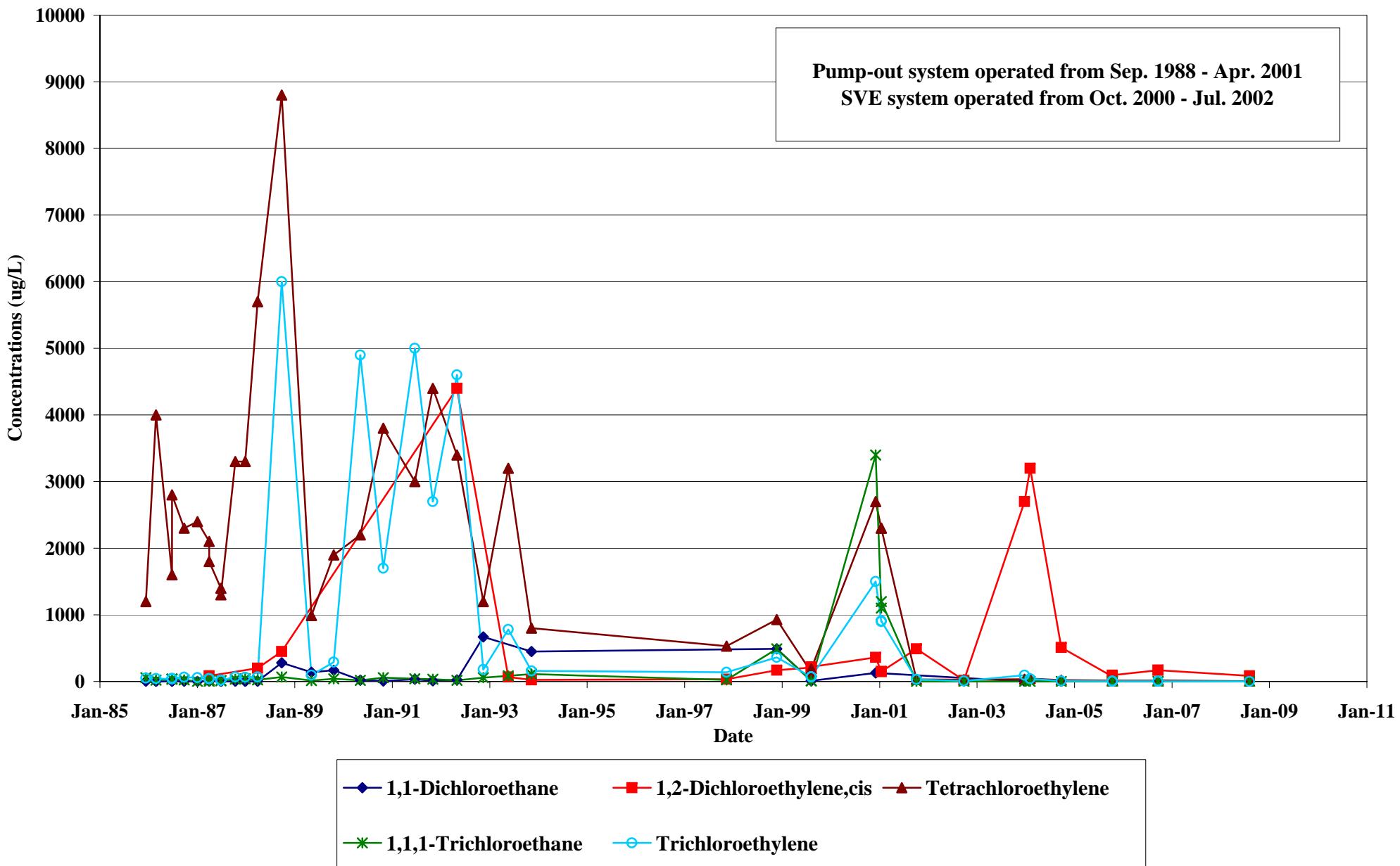


Figure 12
EM8D
VOC Historical Concentrations

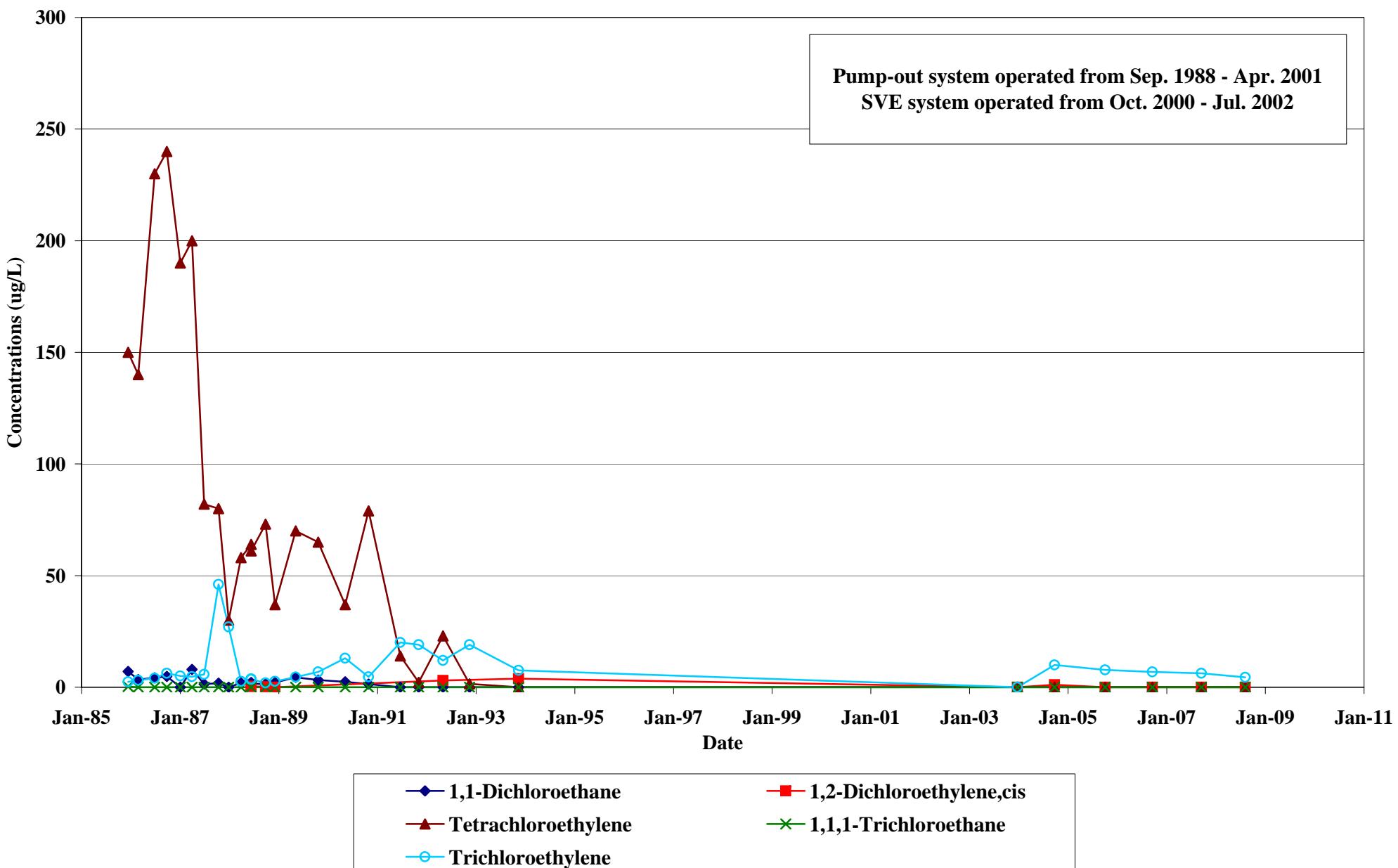


Figure 13
EM9M
VOC Historical Concentrations

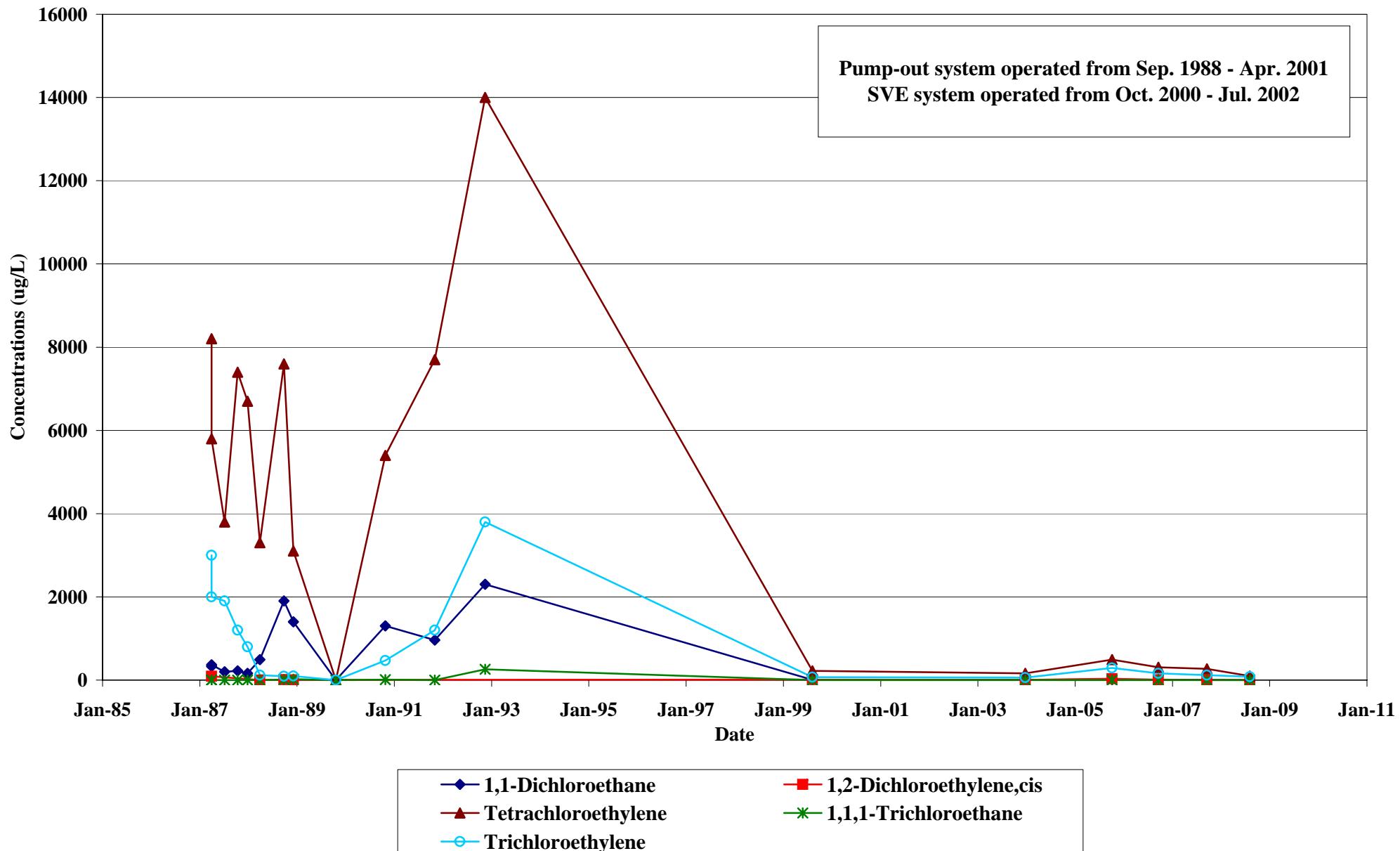


Figure 14
EM22D
VOC Historical Concentrations

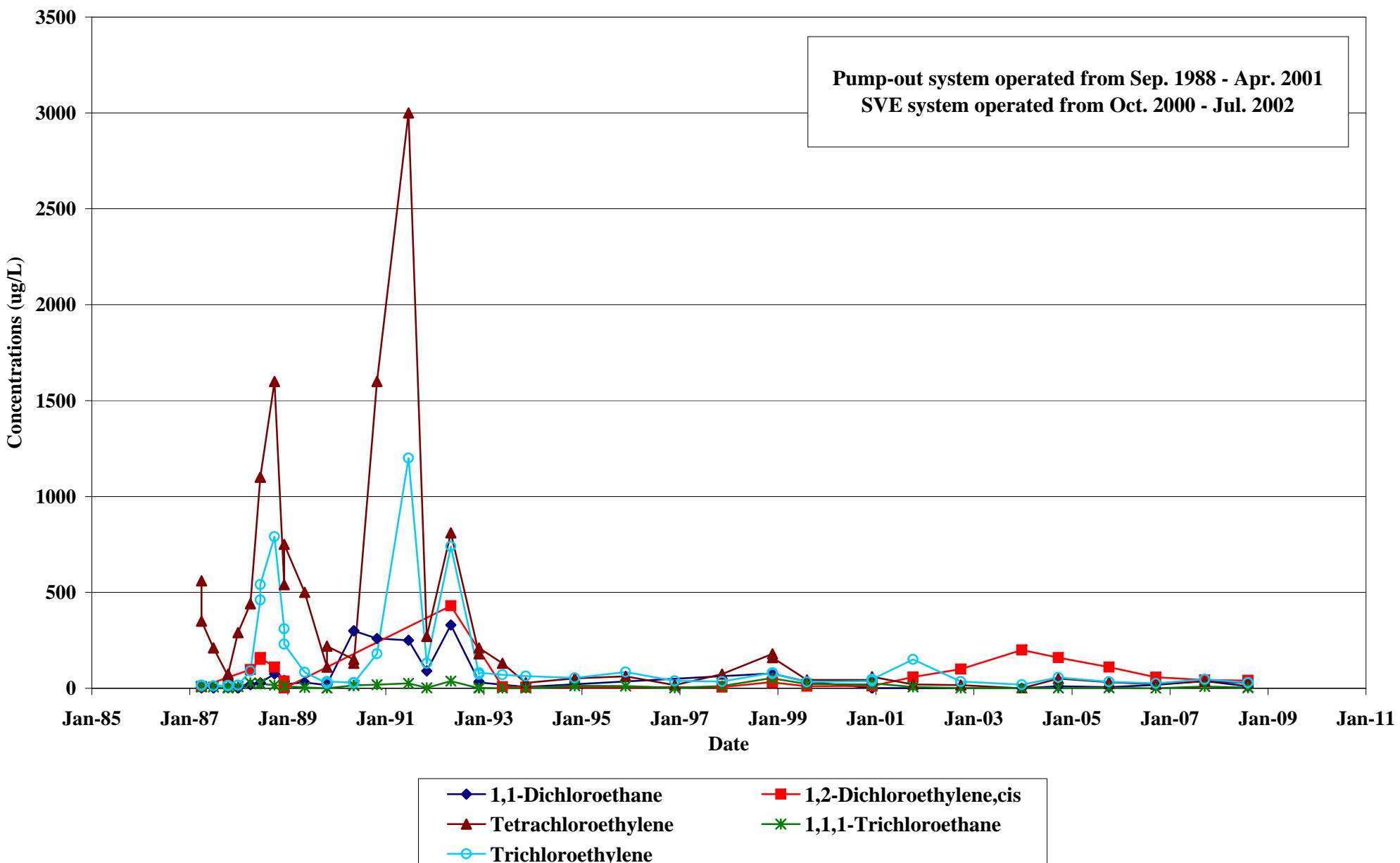


Figure 15
EM24D
VOC Historical Concentrations

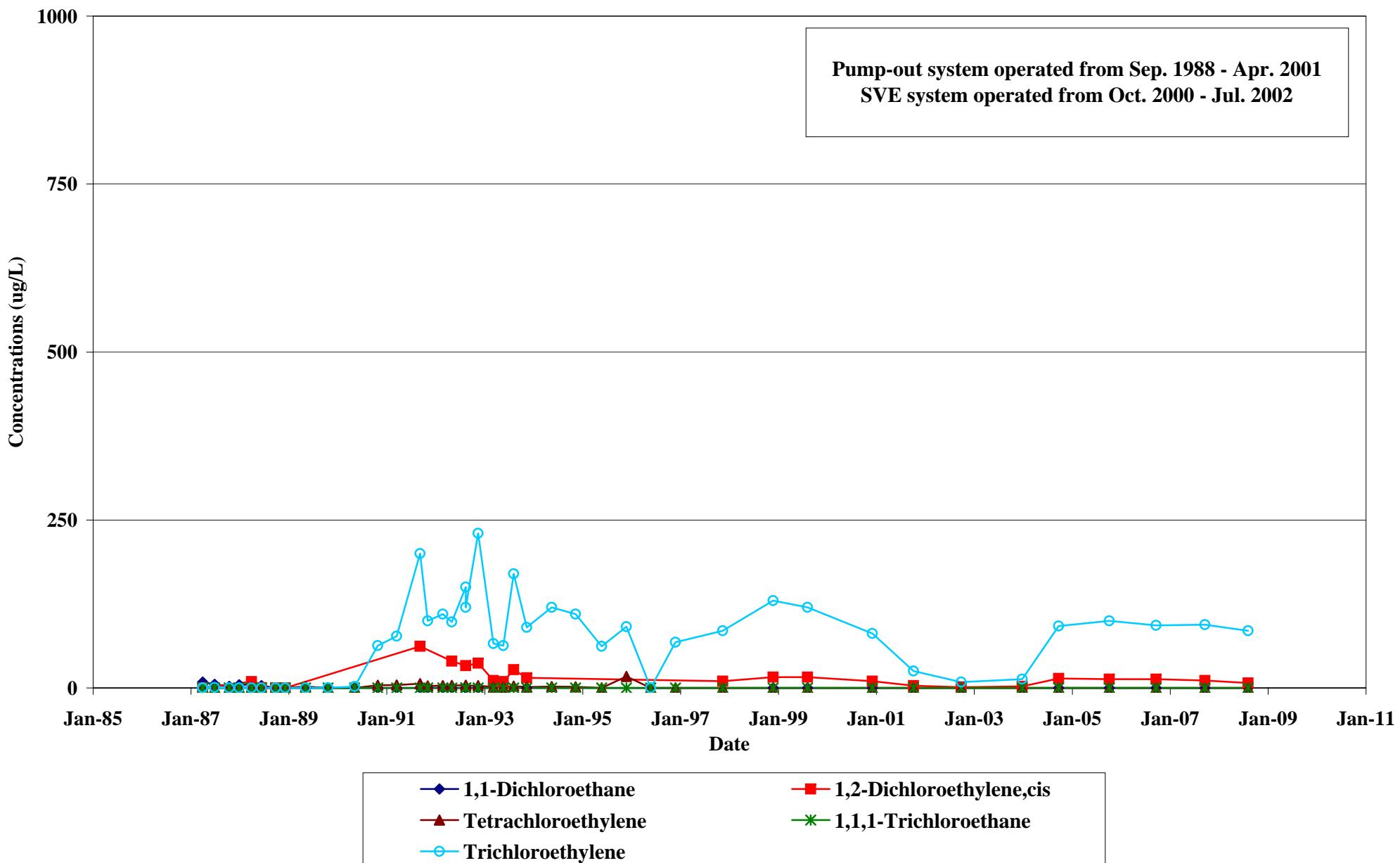


Figure 16
NW2D
VOC Historical Concentrations

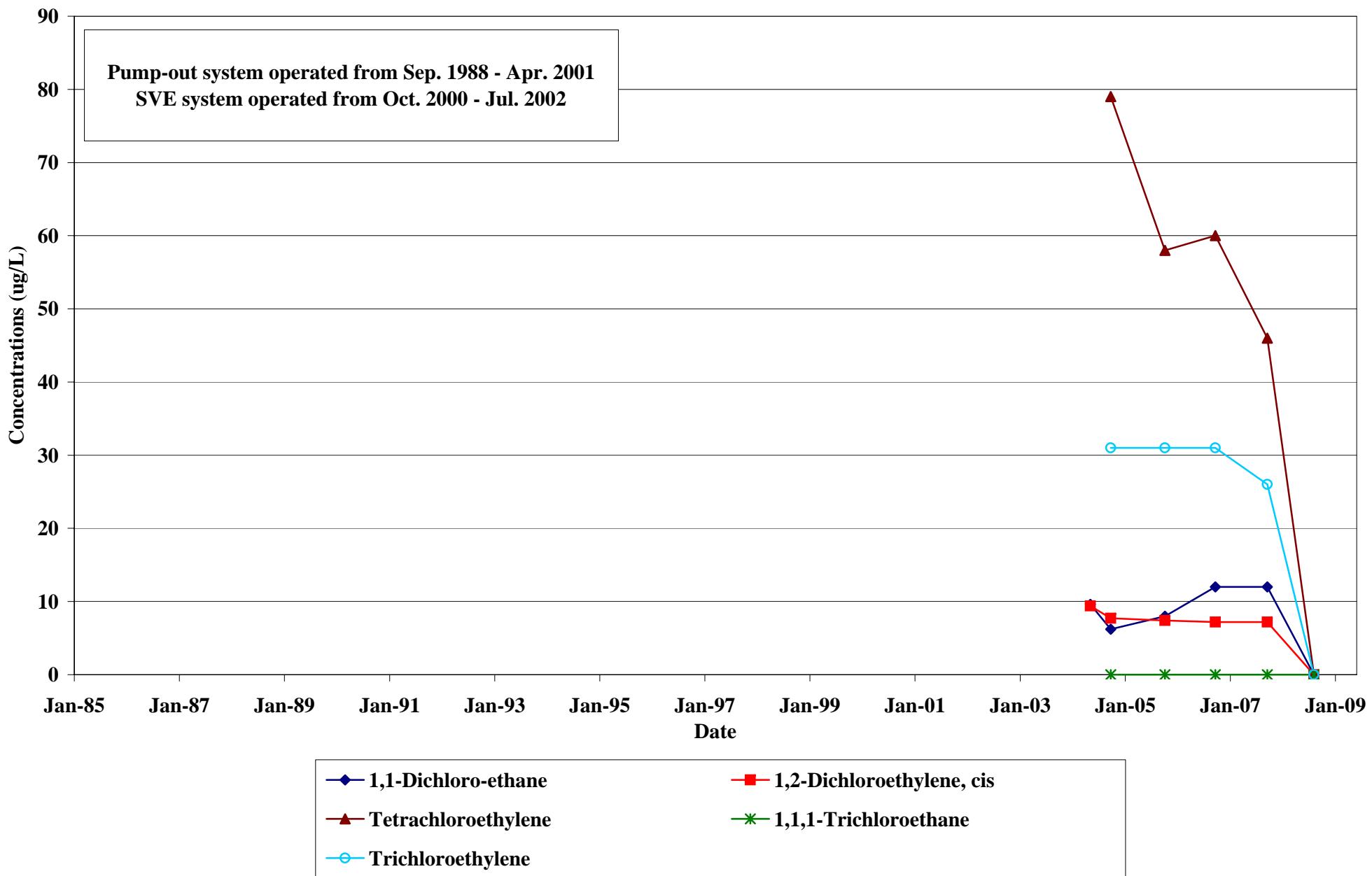


Figure 17
EM8S
VOC Historical Total Moles and Mole Percentage

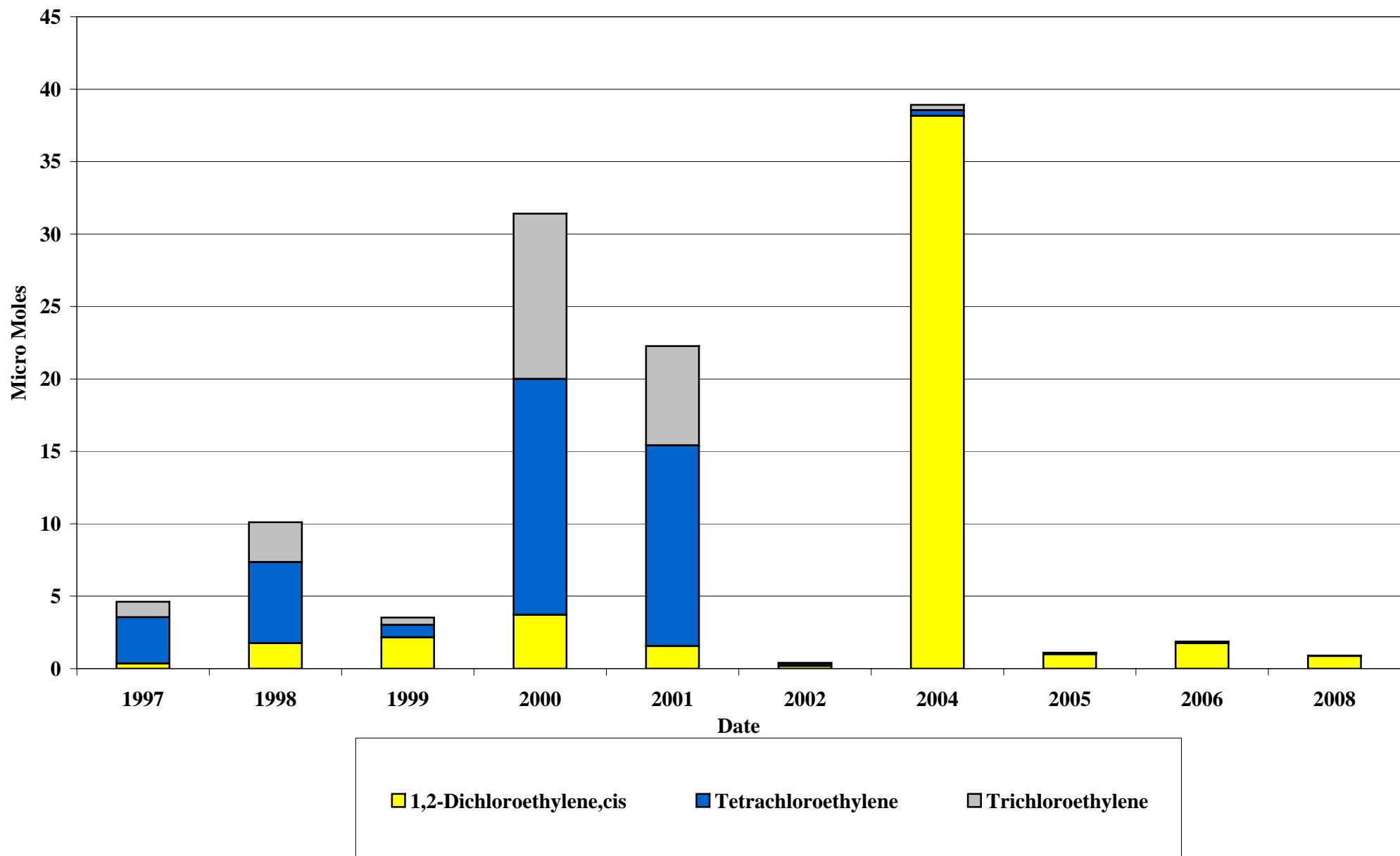
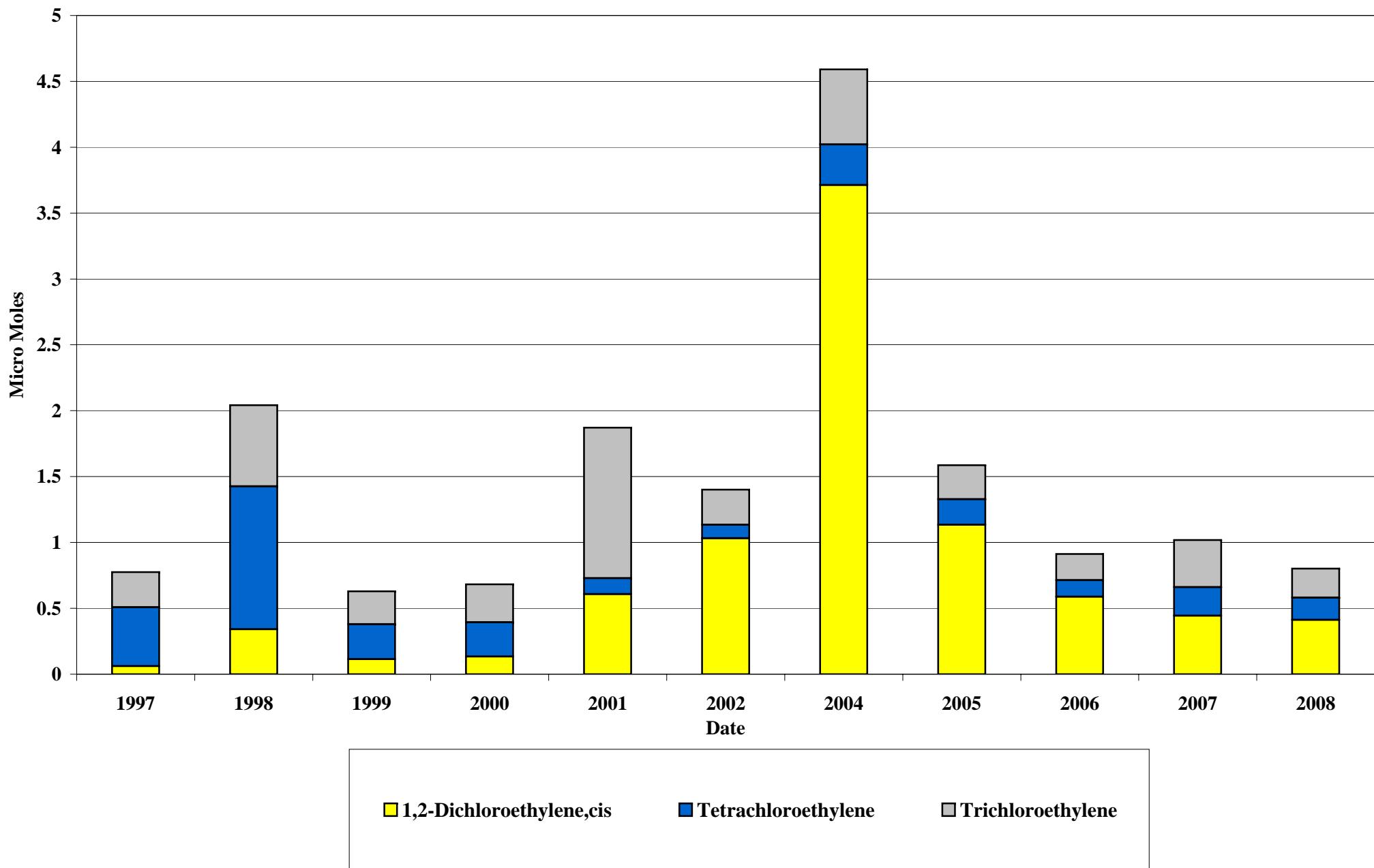
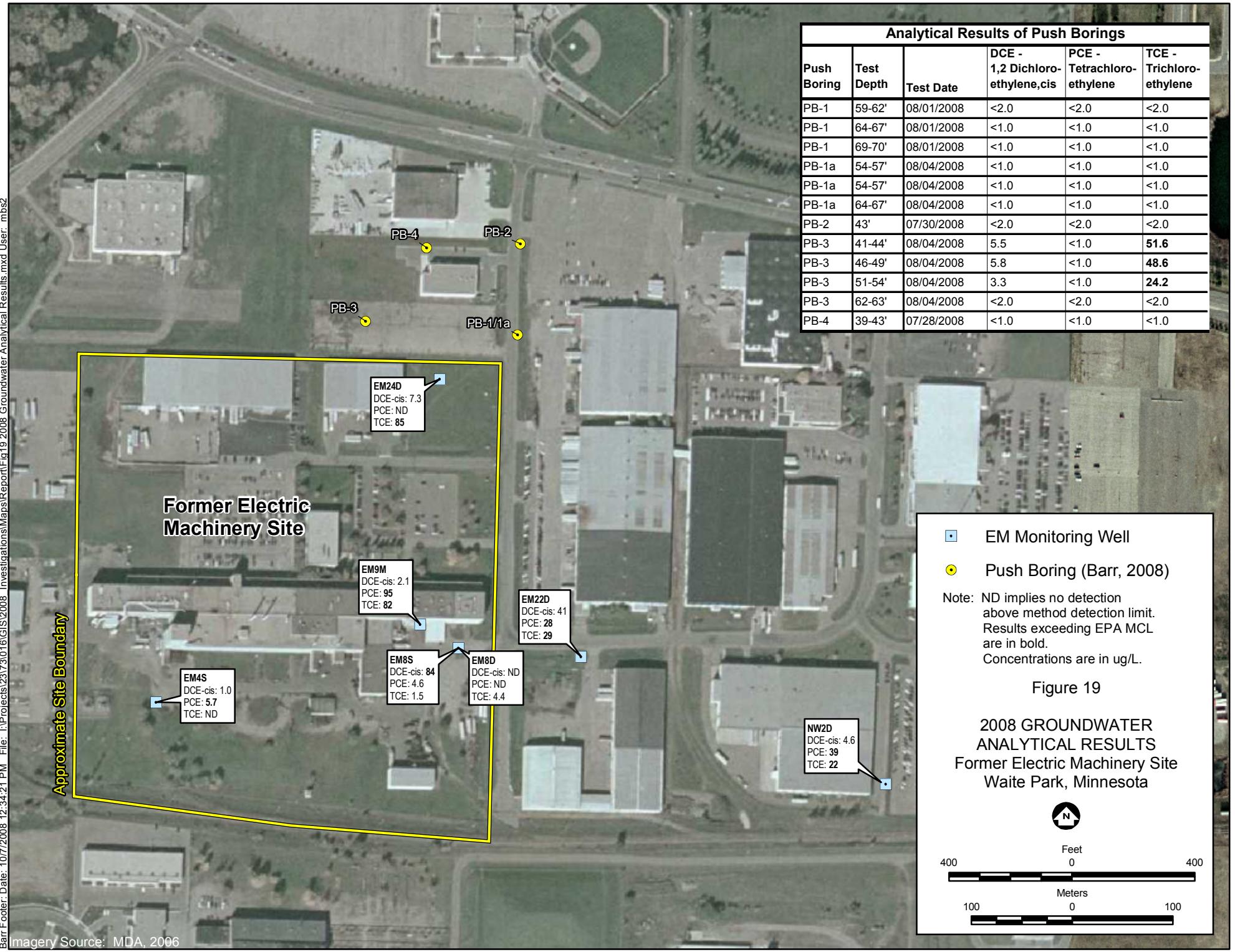


Figure 18
EM22D
VOC Historical Total Moles and Mole Percentage





Appendices

Appendix A

Vapor Investigation – Laboratory Analytical Data

August 04, 2008

Client Services
Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601

RE: Project: 23/73-0162007101
Pace Project No.: 1077716

Dear Client Services:

Enclosed are the analytical results for sample(s) received by the laboratory on July 25, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

The samples did not indicate the presence of any tentatively identified compounds (TICs) including 1,4-dioxane.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Shanna Miller

shanna.miller@pacelabs.com
Project Manager

Florida (Nelap) Certification #: E87605
Illinois Certification #: 200011
Iowa Certification #: 368
Minnesota Certification #: 027-053-137
Wisconsin Certification #: 999407970

Enclosures

REPORT OF LABORATORY ANALYSIS

Page 1 of 14

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SAMPLE SUMMARY

Project: 23/73-0162007101

Pace Project No.: 1077716

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1077716001	R-1, 3-4'	Air	07/24/08 09:20	07/25/08 14:01
1077716002	R-2, 3-4'	Air	07/24/08 09:45	07/25/08 14:01
1077716004	R-3, 3-4'	Air	07/24/08 10:49	07/25/08 14:01
1077716005	WC-1, 7'	Air	07/24/08 11:20	07/25/08 14:01
1077716006	WC-1, 11'	Air	07/24/08 11:45	07/25/08 14:01
1077716007	WC-1, 17'	Air	07/24/08 12:05	07/25/08 14:01

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 23/73-0162007101
 Pace Project No.: 1077716

Lab ID	Sample ID	Method	Analysts	Analytes Reported
1077716001	R-1, 3-4'	TO-15	LCW	12
1077716002	R-2, 3-4'	TO-15	LCW	12
1077716004	R-3, 3-4'	TO-15	LCW	12
1077716005	WC-1, 7'	TO-15	LCW	12
1077716006	WC-1, 11'	TO-15	LCW	12
1077716007	WC-1, 17'	TO-15	LCW	12

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007101

Pace Project No.: 1077716

Method: TO-15

Description: TO15 MSV AIR

Client: PASI Pittsburgh

Date: August 04, 2008

General Information:

6 samples were analyzed for TO-15. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: AIR/7210

D6: The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 506803)
- Trichloroethene

Additional Comments:

Analyte Comments:

QC Batch: AIR/7210

A3: The sample was analyzed by serial dilution.

- R-2, 3-4' (Lab ID: 1077716002)
 - Tetrachloroethene
 - Trichloroethene
- R-3, 3-4' (Lab ID: 1077716004)
 - 1,1,1-Trichloroethane
 - Tetrachloroethene
- WC-1, 11' (Lab ID: 1077716006)
 - Tetrachloroethene
 - Trichloroethene

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007101

Pace Project No.: 1077716

Method: TO-15

Description: TO15 MSV AIR

Client: PASI Pittsburgh

Date: August 04, 2008

Analyte Comments:

QC Batch: AIR/7210

A3: The sample was analyzed by serial dilution.

- WC-1, 17' (Lab ID: 1077716007)
 - cis-1,2-Dichloroethene
 - Tetrachloroethene
 - Trichloroethene
- WC-1, 7' (Lab ID: 1077716005)
 - Tetrachloroethene
 - Trichloroethene

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- R-3, 3-4' (Lab ID: 1077716004)
 - Trichloroethene
- WC-1, 11' (Lab ID: 1077716006)
 - cis-1,2-Dichloroethene
- WC-1, 7' (Lab ID: 1077716005)
 - cis-1,2-Dichloroethene

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007101

Pace Project No.: 1077716

Sample: R-1, 3-4'	Lab ID: 1077716001	Collected: 07/24/08 09:20	Received: 07/25/08 14:01	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	8.1	ug/m3	0.96	1.48			07/30/08 01:26	71-43-2
Chloroform	ND	ug/m3	1.5	1.48			07/30/08 01:26	67-66-3
Chloromethane	ND	ug/m3	0.62	1.48			07/30/08 01:26	74-87-3
1,1-Dichloroethane	ND	ug/m3	1.2	1.48			07/30/08 01:26	75-34-3
1,2-Dichloroethane	ND	ug/m3	1.2	1.48			07/30/08 01:26	107-06-2
1,1-Dichloroethene	ND	ug/m3	1.2	1.48			07/30/08 01:26	75-35-4
cis-1,2-Dichloroethene	ND	ug/m3	1.2	1.48			07/30/08 01:26	156-59-2
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.48			07/30/08 01:26	156-60-5
Tetrachloroethene	517	ug/m3	20.7	14.8			07/30/08 12:47	127-18-4
1,1,1-Trichloroethane	31.8	ug/m3	1.6	1.48			07/30/08 01:26	71-55-6
Trichloroethene	37.9	ug/m3	1.6	1.48			07/30/08 01:26	79-01-6
Vinyl chloride	ND	ug/m3	0.77	1.48			07/30/08 01:26	75-01-4

Date: 08/04/2008 09:25 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007101

Pace Project No.: 1077716

Sample: R-2, 3-4'	Lab ID: 1077716002	Collected: 07/24/08 09:45	Received: 07/25/08 14:01	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	15.7	ug/m3	1.0	1.59		07/30/08 01:58	71-43-2	
Chloroform	ND	ug/m3	1.6	1.59		07/30/08 01:58	67-66-3	
Chloromethane	ND	ug/m3	0.67	1.59		07/30/08 01:58	74-87-3	
1,1-Dichloroethane	ND	ug/m3	1.3	1.59		07/30/08 01:58	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.3	1.59		07/30/08 01:58	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.3	1.59		07/30/08 01:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.3	1.59		07/30/08 01:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.3	1.59		07/30/08 01:58	156-60-5	
Tetrachloroethene	9530	ug/m3	356	254.4		07/30/08 13:20	127-18-4	A3
1,1,1-Trichloroethane	119	ug/m3	1.7	1.59		07/30/08 01:58	71-55-6	
Trichloroethene	642	ug/m3	280	254.4		07/30/08 13:20	79-01-6	A3
Vinyl chloride	ND	ug/m3	0.83	1.59		07/30/08 01:58	75-01-4	

Date: 08/04/2008 09:25 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007101

Pace Project No.: 1077716

Sample: R-3, 3-4'	Lab ID: 1077716004	Collected: 07/24/08 10:49	Received: 07/25/08 14:01	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	20.7 ug/m3		0.96	1.48			07/30/08 02:30	71-43-2
Chloroform	ND ug/m3		1.5	1.48			07/30/08 02:30	67-66-3
Chloromethane	ND ug/m3		0.62	1.48			07/30/08 02:30	74-87-3
1,1-Dichloroethane	ND ug/m3		1.2	1.48			07/30/08 02:30	75-34-3
1,2-Dichloroethane	ND ug/m3		1.2	1.48			07/30/08 02:30	107-06-2
1,1-Dichloroethene	ND ug/m3		1.2	1.48			07/30/08 02:30	75-35-4
cis-1,2-Dichloroethene	16.3 ug/m3		1.2	1.48			07/30/08 02:30	156-59-2
trans-1,2-Dichloroethene	ND ug/m3		1.2	1.48			07/30/08 02:30	156-60-5
Tetrachloroethene	74100 ug/m3		1330	947.2			07/30/08 13:50	127-18-4
1,1,1-Trichloroethane	5430 ug/m3		1040	947.2			07/30/08 13:50	71-55-6
Trichloroethene	395 ug/m3		1.6	1.48			07/30/08 02:30	79-01-6
Vinyl chloride	ND ug/m3		0.77	1.48			07/30/08 02:30	E

Date: 08/04/2008 09:25 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007101

Pace Project No.: 1077716

Sample: WC-1, 7'	Lab ID: 1077716005	Collected: 07/24/08 11:20	Received: 07/25/08 14:01	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	12.1	ug/m3	0.90	1.38		07/30/08 04:06	71-43-2	
Chloroform	ND	ug/m3	1.4	1.38		07/30/08 04:06	67-66-3	
Chloromethane	ND	ug/m3	0.58	1.38		07/30/08 04:06	74-87-3	
1,1-Dichloroethane	ND	ug/m3	1.1	1.38		07/30/08 04:06	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.1	1.38		07/30/08 04:06	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.1	1.38		07/30/08 04:06	75-35-4	
cis-1,2-Dichloroethene	181	ug/m3	1.1	1.38		07/30/08 04:06	156-59-2	E
trans-1,2-Dichloroethene	12.9	ug/m3	1.1	1.38		07/30/08 04:06	156-60-5	
Tetrachloroethene	22600	ug/m3	1240	883.2		07/30/08 14:19	127-18-4	A3
1,1,1-Trichloroethane	138	ug/m3	1.5	1.38		07/30/08 04:06	71-55-6	
Trichloroethene	1830	ug/m3	972	883.2		07/30/08 14:19	79-01-6	A3
Vinyl chloride	ND	ug/m3	0.72	1.38		07/30/08 04:06	75-01-4	

Date: 08/04/2008 09:25 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007101

Pace Project No.: 1077716

Sample: WC-1, 11'	Lab ID: 1077716006	Collected: 07/24/08 11:45	Received: 07/25/08 14:01	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	7.6	ug/m3	0.96	1.48		07/30/08 04:37	71-43-2	
Chloroform	ND	ug/m3	1.5	1.48		07/30/08 04:37	67-66-3	
Chloromethane	ND	ug/m3	0.62	1.48		07/30/08 04:37	74-87-3	
1,1-Dichloroethane	5.4	ug/m3	1.2	1.48		07/30/08 04:37	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.2	1.48		07/30/08 04:37	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.2	1.48		07/30/08 04:37	75-35-4	
cis-1,2-Dichloroethene	247	ug/m3	1.2	1.48		07/30/08 04:37	156-59-2	E
trans-1,2-Dichloroethene	18.1	ug/m3	1.2	1.48		07/30/08 04:37	156-60-5	
Tetrachloroethene	18000	ug/m3	1330	947.2		07/30/08 14:49	127-18-4	A3
1,1,1-Trichloroethane	158	ug/m3	1.6	1.48		07/30/08 04:37	71-55-6	
Trichloroethene	1710	ug/m3	1040	947.2		07/30/08 14:49	79-01-6	A3
Vinyl chloride	ND	ug/m3	0.77	1.48		07/30/08 04:37	75-01-4	

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ANALYTICAL RESULTS

Project: 23/73-0162007101

Pace Project No.: 1077716

Sample: WC-1, 17'	Lab ID: 1077716007	Collected: 07/24/08 12:05	Received: 07/25/08 14:01	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	72.8 ug/m3		1.0	1.54		07/30/08 05:08	71-43-2	
Chloroform	6.8 ug/m3		1.5	1.54		07/30/08 05:08	67-66-3	
Chloromethane	ND ug/m3		0.65	1.54		07/30/08 05:08	74-87-3	
1,1-Dichloroethane	13.4 ug/m3		1.3	1.54		07/30/08 05:08	75-34-3	
1,2-Dichloroethane	ND ug/m3		1.3	1.54		07/30/08 05:08	107-06-2	
1,1-Dichloroethene	7.2 ug/m3		1.2	1.54		07/30/08 05:08	75-35-4	
cis-1,2-Dichloroethene	1160 ug/m3		798	985.6		07/30/08 15:19	156-59-2	A3
trans-1,2-Dichloroethene	23.7 ug/m3		1.2	1.54		07/30/08 05:08	156-60-5	
Tetrachloroethene	52100 ug/m3		1380	985.6		07/30/08 15:19	127-18-4	A3
1,1,1-Trichloroethane	216 ug/m3		1.7	1.54		07/30/08 05:08	71-55-6	
Trichloroethene	4920 ug/m3		1080	985.6		07/30/08 15:19	79-01-6	
Vinyl chloride	ND ug/m3		0.80	1.54		07/30/08 05:08	75-01-4	

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QUALITY CONTROL DATA

Project: 23/73-0162007101

Pace Project No.: 1077716

QC Batch: AIR/7210 Analysis Method: TO-15

QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level

Associated Lab Samples: 1077716001, 1077716002, 1077716004, 1077716005, 1077716006, 1077716007

METHOD BLANK: 506578

Associated Lab Samples: 1077716001, 1077716002, 1077716004, 1077716005, 1077716006, 1077716007

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	
1,1-Dichloroethane	ug/m3	ND	0.82	
1,1-Dichloroethene	ug/m3	ND	0.81	
1,2-Dichloroethane	ug/m3	ND	0.82	
Benzene	ug/m3	ND	0.65	
Chloroform	ug/m3	ND	0.99	
Chloromethane	ug/m3	ND	0.42	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	
Tetrachloroethene	ug/m3	ND	1.4	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	
Trichloroethene	ug/m3	ND	1.1	
Vinyl chloride	ug/m3	ND	0.52	

LABORATORY CONTROL SAMPLE: 506579

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	61	56.9	93	60-134	
1,1-Dichloroethane	ug/m3	37	34.9	94	59-136	
1,1-Dichloroethene	ug/m3	41.5	39.1	94	60-137	
1,2-Dichloroethane	ug/m3	44.9	41.1	92	56-141	
Benzene	ug/m3	32.5	30.7	94	64-125	
Chloroform	ug/m3	53.1	48.3	91	50-150	
Chloromethane	ug/m3	20.8	19.5	94	56-144	
cis-1,2-Dichloroethene	ug/m3	41.1	38.4	93	62-135	
Tetrachloroethene	ug/m3	73.1	67.7	93	60-137	
trans-1,2-Dichloroethene	ug/m3	43.1	39.8	92	50-150	
Trichloroethene	ug/m3	55.2	61.0	111	60-134	
Vinyl chloride	ug/m3	25.2	24.1	95	66-132	

SAMPLE DUPLICATE: 506802

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	6.9	6.9	.9	25	
1,1-Dichloroethane	ug/m3	ND	ND	0	25	
1,1-Dichloroethene	ug/m3	ND	ND	0	25	
1,2-Dichloroethane	ug/m3	ND	ND	0	25	
Benzene	ug/m3	2.5	2.3	5	25	
Chloroform	ug/m3	ND	ND	0	25	
Chloromethane	ug/m3	ND	ND	0	25	
cis-1,2-Dichloroethene	ug/m3	ND	ND	0	25	

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QUALITY CONTROL DATA

Project: 23/73-0162007101

Pace Project No.: 1077716

SAMPLE DUPLICATE: 506802

Parameter	Units	1077623005 Result	Dup Result	RPD	Max RPD	Qualifiers
Tetrachloroethene	ug/m3	5.5	5.1	8	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND	0	25	
Trichloroethene	ug/m3	ND	ND	0	25	
Vinyl chloride	ug/m3	ND	ND	0	25	

SAMPLE DUPLICATE: 506803

Parameter	Units	1077422001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND	0	25	
1,1-Dichloroethane	ug/m3	ND	ND	0	25	
1,1-Dichloroethene	ug/m3	ND	ND	0	25	
1,2-Dichloroethane	ug/m3	ND	ND	0	25	
Benzene	ug/m3	ND	ND	0	25	
Chloroform	ug/m3	ND	ND	0	25	
Chloromethane	ug/m3	0.66	.52J	24	25	
cis-1,2-Dichloroethene	ug/m3	ND	ND	0	25	
Tetrachloroethene	ug/m3	151	152	.9	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND	0	25	
Trichloroethene	ug/m3	ND	1.4J	29	25 D6	
Vinyl chloride	ug/m3	ND	ND	0	25	

Date: 08/04/2008 09:25 AM

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 23/73-0162007101

Pace Project No.: 1077716

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

A3 The sample was analyzed by serial dilution.

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

BARR**Chain of Custody**

4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

Project Number

23 / 73 - 0162007101

Project Name

Electric Machinery Site

No 25278

Sample Identification	Collection		Matrix	Number of Containers/Preservative				COC 1 of 1									
				Water		Soil											
	Date	Time		Soil	Grab	Comp.	QC										
1. R-1, 3-4' Summa # 0512	7/24/08	09:20		X X				Volatile Organics (Pres.) *1 Semivolatile Organics *2 Dissolved Metals (HNO ₃) Total Metals (HNO ₃) General (Unpreserved) *3 Cyanide (NaOH) Nutrients (H ₂ SO ₄) *4 Oil and Grease (H ₂ SO ₄) Sulfide (Zn Acetate) Methane Bacteria (Na ₂ S ₂ O ₃) DRO (HCl)	Initial Vac. Final Vac. Initial Vac. Final Vac. Initial Vac. Final Vac. Initial Vac. Final Vac. Initial Vac. Final Vac. Initial Vac. Final Vac. Initial Vac. Final Vac.	210 in Hg 2 in Hg 29 in Hg 3 in Hg 13 in Hg 2 in Hg ~28 in Hg 3 in Hg 27 in Hg 0 in Hg +30 in Hg 10 in Hg 26.5 in Hg 2.5 in Hg	VOCs (2-oz tared MeOH) *1 GRO, BTEX (2-oz tared MeOH) *1 DRO (2-oz tared) - 25 grams Metals (2-oz unpreserved) SVOCs (2 or 4-oz unpres.) *2 % Moisture (plastic vial, unpres.)	AIR	1	1	1	1	Run: T015 Short 001 List, (See attached Table 002 call Andrea Nord 003 w/ Questions 004 005
2. R-2, 3-4' Summa # 0123	7/24/08	09:45		X X											006		
3. R-4, 3-4' Summa # 0068	7/24/08	10:25		X X											007		
4. R-3, 3-4' Summa # 0704	7/24/08	10:49		X Y													
5. WC-1, 7' Summa # 0966	7/24/08	11:20		X X													
6. WE-1, 11' Summa # 1268	7/24/08	11:45		X Y													
7. WC-1, 17' Summa # 11941	7/24/08	12:05		X X													
8.																	
9.																	
10.																	
11.																	
12.																	

Common Parameter/Container - Preservation Key

*1 - Volatile Organics = BTEX, GRO, TPH, Full List

*2 - Semivolatile Organics = PAHs, PCP, Dioxins, Full List, Herbicide/Pesticide/PCBs

*3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate

*4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By: *John P. Barr*

On Ice?

Y N

Date

Time

Received by:

Relinquished By:

On Ice?

Y N

Date

Time

Received by:

Samples Shipped VIA: Air Freight Federal Express Sampler Other *Road runner*

Air Bill Number:

Date

Date

Time

Date

Time

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

T=Anal

Project Manager: *MCF*Project Contact: *AN*Sampled by: *LML2/Kam*Laboratory: *PACE*

Remarks:

Give Ganges to
Shanna

Sample Condition Upon Receipt

PaceAnalytical

Client Name: BARR

Project # 1077716

Courier: FedEx UPS USPS Client Commercial Pace Other *Ross Remick*

Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes noPacking Material: Bubble Wrap Bubble Bags None Other _____Thermometer Used 230194010_72340120 Type of Ice: Wet Blue None Samples on ice, cooling process has begunCooler Temperature *4°C*

Biological Tissue Is Frozen: Yes No

Date and Initials of person examining contents: *7-25-08 JS*

Temp should be above freezing to 6°C

Comments: _____

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: *7 CANS, 7 BOTTLES**Cancel 7-4, 7-14, 7-15 pm Andras Nnd scm 7/28/08*Project Manager Review: *SCM*Date: *7/28/08*

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Appendix B
Direct Push Boring Logs

August 08, 2008

Client Services
Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601

RE: Project: 23/73-0162007101
Pace Project No.: 1077929

Dear Client Services:

Enclosed are the analytical results for sample(s) received by the laboratory on July 30, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

The samples did not indicate the presence of any tentatively identified compounds (TICs) including 1,4-dioxane.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Shanna Miller

shanna.miller@pacelabs.com
Project Manager

Florida (Nelap) Certification #: E87605
Illinois Certification #: 200011
Iowa Certification #: 368
Minnesota Certification #: 027-053-137
Wisconsin Certification #: 999407970

Enclosures

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 23/73-0162007101

Pace Project No.: 1077929

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1077929001	R-4a,3'-4'	Air	07/25/08 17:10	07/30/08 16:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 23/73-0162007101

Pace Project No.: 1077929

Lab ID	Sample ID	Method	Analysts	Analytes Reported
1077929001	R-4a,3'-4'	TO-15	LCW	12

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007101

Pace Project No.: 1077929

Method: TO-15

Description: TO15 MSV AIR

Client: PASI Pittsburgh

Date: August 08, 2008

General Information:

1 sample was analyzed for TO-15. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007101

Pace Project No.: 1077929

Sample: R-4a,3'-4'	Lab ID: 1077929001	Collected: 07/25/08 17:10	Received: 07/30/08 16:45	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	1.6	ug/m3	1.0	1.59		08/07/08 04:21	71-43-2	
Chloroform	ND	ug/m3	1.6	1.59		08/07/08 04:21	67-66-3	
Chloromethane	ND	ug/m3	0.67	1.59		08/07/08 04:21	74-87-3	
1,1-Dichloroethane	ND	ug/m3	1.3	1.59		08/07/08 04:21	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.3	1.59		08/07/08 04:21	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.3	1.59		08/07/08 04:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.3	1.59		08/07/08 04:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.3	1.59		08/07/08 04:21	156-60-5	
Tetrachloroethene	766	ug/m3	22.3	15.9		08/07/08 14:12	127-18-4	
1,1,1-Trichloroethane	27.4	ug/m3	1.7	1.59		08/07/08 04:21	71-55-6	
Trichloroethene	8.2	ug/m3	1.7	1.59		08/07/08 04:21	79-01-6	
Vinyl chloride	ND	ug/m3	0.83	1.59		08/07/08 04:21	75-01-4	

Date: 08/08/2008 08:38 AM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 23/73-0162007101

Pace Project No.: 1077929

QC Batch:	AIR/7243	Analysis Method:	TO-15
QC Batch Method:	TO-15	Analysis Description:	TO15 MSV AIR Low Level
Associated Lab Samples:	1077929001		

METHOD BLANK: 509907

Associated Lab Samples: 1077929001

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	
1,1-Dichloroethane	ug/m3	ND	0.82	
1,1-Dichloroethene	ug/m3	ND	0.81	
1,2-Dichloroethane	ug/m3	ND	0.82	
Benzene	ug/m3	ND	0.65	
Chloroform	ug/m3	ND	0.99	
Chloromethane	ug/m3	ND	0.42	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	
Tetrachloroethene	ug/m3	ND	1.4	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	
Trichloroethene	ug/m3	ND	1.1	
Vinyl chloride	ug/m3	ND	0.52	

LABORATORY CONTROL SAMPLE: 509908

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	61	54.3	89	60-134	
1,1-Dichloroethane	ug/m3	37	33.0	89	59-136	
1,1-Dichloroethene	ug/m3	41.5	36.7	88	60-137	
1,2-Dichloroethane	ug/m3	44.9	39.5	88	56-141	
Benzene	ug/m3	32.5	28.5	88	64-125	
Chloroform	ug/m3	53.1	46.2	87	50-150	
Chloromethane	ug/m3	20.8	18.9	91	56-144	
cis-1,2-Dichloroethene	ug/m3	41.1	36.7	89	62-135	
Tetrachloroethene	ug/m3	73.1	62.6	86	60-137	
trans-1,2-Dichloroethene	ug/m3	43.1	37.6	87	50-150	
Trichloroethene	ug/m3	55.2	57.4	104	60-134	
Vinyl chloride	ug/m3	25.2	23.8	94	66-132	

SAMPLE DUPLICATE: 510374

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND	0	25	
1,1-Dichloroethane	ug/m3	ND	ND	0	25	
1,1-Dichloroethene	ug/m3	ND	ND	0	25	
1,2-Dichloroethane	ug/m3	ND	ND	0	25	
Benzene	ug/m3	1.2	1.1	1	25	
Chloroform	ug/m3	ND	ND	0	25	
Chloromethane	ug/m3	1.0	1.0	2	25	
cis-1,2-Dichloroethene	ug/m3	ND	ND	0	25	

Date: 08/08/2008 08:38 AM

REPORT OF LABORATORY ANALYSIS

Page 6 of 8

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QUALITY CONTROL DATA

Project: 23/73-0162007101

Pace Project No.: 1077929

SAMPLE DUPLICATE: 510374

Parameter	Units	1077477003 Result	Dup Result	RPD	Max RPD	Qualifiers
Tetrachloroethene	ug/m3	ND	ND	0	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND	0	25	
Trichloroethene	ug/m3	ND	ND	0	25	
Vinyl chloride	ug/m3	ND	ND	0	25	

Date: 08/08/2008 08:38 AM

REPORT OF LABORATORY ANALYSIS

Page 7 of 8

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QUALIFIERS

Project: 23/73-0162007101

Pace Project No.: 1077929

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

1077929

Chain of Custody**BARR**

4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

Project Number

23/73-0162007101

Project Name

No 26352

Sample Identification	Collection		Matrix	Type	Number of Containers/Preservative			COC 1 of _____
	Date	Time			Water	Air	Soil	
1. R-4a, 3'-4'	7/25/08	17:10		XX				
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								

Common Parameter/Container - Preservation Key

*1 - Volatile Organics = BTEX, GRQ, TPH, Full List

*2 - Semivolatile Organics = PAHs, PCP, Dioxins, Full List, Herbicide/Pesticide/PCBs

*3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate

*4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By: *Lavon Larkin*

On Ice?

Y

N

Date

7/25/08

Time

:

Received by:

Hay M. Jackson Pace

Date

7/30/08

Time

16:45

Relinquished By:

On Ice?

Y

N

Date

:

Time

:

Received by:

Samples Shipped VIA: Air Freight Federal Express Sampler Other

Air Bill Number:

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

HRLGISTDFORMS|Chain Of Custody Form RLG Rev. 07/01/05

Project Manager: Mary FinchProject Contact: Andrea NordSampled by: Lavon LarkinLaboratory: Pace

Remarks:

1 Canister 0378
TO15 shortlist 1077929001
See Attached table 1

T-Ams

Sample Condition Upon Receipt

Pace Analytical

Client Name: BARR Project # 1077929Courier: Fed Ex UPS USPS Client Commercial Pace Other
Tracking #: _____Custody Seal on Cooler/Box Present: yes no Seals intact: yes noPacking Material: Bubble Wrap Bubble Bags None OtherThermometer Used 230104010, 72310420Type of Ice: Wet Blue None Samples on ice, cooling process has begunCooler Temperature 43Biological Tissue Is Frozen: Yes NoDate and Initials of person examining contents: 7-30-08 K

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>PAC (CAN)</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted:

Date/Time: _____

Comments/ Resolution: I CAN, I GANGEProject Manager Review: SCMDate: 7/30/08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Appendix C

Additional Plume Delineation – Laboratory Analytical Data

Client Cooper Industries/ABB
 Project Name Electric Machinery
 Number 23/73-016
 Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
 Drill Method Direct Push (Geoprobe)
 Drilling Started 7/31/08 Ended 7/31/08
 Logged By LML2

LOG OF GEOPROBE PB-1
 Unique Well No. --
DRAFT SHEET 1 OF 3
 Ground Surface Elevation --
 Top of Riser --
 Total Depth 62.0

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	%GR/SA/ FINEs	Headspace ppm	Discoloration- Odor- Sheen	Moisture	ASTM	LITHOLOGY	DESCRIPTION	DEPTH FEET
5	/90/10	Tr/100/Tr	0.0	None None None None V. Sl. Sweet None None None	Moist	SP-SM			0-1.4': fine to medium grained sand with silt, mainly quartz sand grains, (10YR 4/3) brown.	
5	/80/20		0.0	Moist	SM				1.4-2.6': Silty fine to medium grained sand, 80% sand, 20% fines, subrounded to subangular grains, mainly quartz, gray (10YR 5/1) to dark brown (10YR 3/3).	
10	10/90/Tr		0.0	Moist					2.6-12': Fine to coarse grained sand with mainly quartz and chert sand grains, 0-10% gravel, trace to 5% fines, (10YR 6/4) light yellowish brown, cobbles present in lower portion of 4-8' interval. Evidence of iron oxidation present.	10
10	/95/5		0.0	Moist						
15	Tr/100/Tr		0.0	Wet		SP			12-16': Trace fine grained gravel, coarsening downward to coarse gravel.	15
15										
20	Tr/100/Tr		0.0	-					16-20': Trace coarse grained gravel.	20
20										
24	/100/Tr								24': 1" clay nodule.	

(continued)

Barr Engineering Co.
 4700 W 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-862-2601



Remarks:
 Headspace measured with PID. Lithologic unit thickness and percentage are approximate. After 16ft moisture difficult to determine due to water added to boring during drilling. Refusal at 62ft. "Tr" = trace.

BGS = "below ground surface"

Additional data may have been collected in the field which is not included on this log.

Client Cooper Industries/ABB
 Project Name Electric Machinery
 Number 23/73-016
 Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
 Drill Method Direct Push (Geoprobe)
 Drilling Started 7/31/08 Ended 7/31/08
 Logged By LM2

LOG OF GEOPROBE PB-1
 Unique Well No. --
DRAFT SHEET 2 OF 3
 Ground Surface Elevation --
 Top of Riser --
 Total Depth 62.0

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	%GR/SA/ FINEs	Headspace ppm	Discoloration- Odor- Sheen	Moisture	ASTM	LITHOLOGY	DESCRIPTION	DEPTH FEET
30	-/100/Tr		0.0	None None None	-	-	SP		2.6-12': Fine to coarse grained sand with mainly quartz and chert sand grains, 0-10% gravel, trace to 5% fines, (10YR 6/4) light yellowish brown, cobbles present in lower portion of 4-8' interval. Evidence of iron oxidation present. <i>(continued)</i>	30
35	-/Tr/100		0.0	None None None	-	-	CH/CL	/\	26.5-32.8': Clay, soft gray (5Y 5/1), trace sand.	35
40	-/Tr/100 40/20/40		0.0	None None None	-	-	CL	/\	28-32.5': 1/8" - 1/2" fine grained sand lenses.	40
45	-/30/70		0.0	None None None	-	-	GP	○	32.8-42': Sandy lean clay with trace to 0% gravel and 30% sand, firm, dark grayish brown (10YR 4/2). 33': 2" thick sandy clay and gravel, 40% fines, 20% sand, 40% gravel.	45
	Tr/30/70		0.0	None None None	-	-	SP		42-44': Gravel with trace sand and clay, surrounded grains of granite and basalt.	
	100/Tr/Tr		0.0	None None None	-	-			44-52.4': fine to coarse grained sand (50%-65%) with gravel (30-45%) some cobbles, 5% fines, no gravel, trace fine and fine coarsening downward to medium grained sand below 52.4'. Light olive brown (2.5Y 5/4).	

(continued)

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Remarks:
 Headspace measured with PID. Lithologic unit thickness and percentage are approximate. After 16ft moisture difficult to determine due to water added to boring during drilling. Refusal at 62ft. "Tr" = trace.

BGS = "below ground surface"

Additional data may have been collected in the field which is not included on this log.

Client Cooper Industries/ABB
Project Name Electric Machinery
Number 23/73-016
Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
Drill Method Direct Push (Geoprobe)
Drilling Started 7/31/08 Ended 7/31/08
Logged By LML2

LOG OF GEOPROBE PB-1
Unique Well No.
DRAFT SHEET 3 OF 3
Ground Surface Elevation --
Top of Riser --
Total Depth 62.0

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	%GR/SA/ FINEs	Headspace ppm	Discoloration- Odor- Sheen	Moisture	ASTM	LITHOLOGY	DESCRIPTION	DEPTH FEET
55			30/55/5	0.0	None None	-			44-52.4': fine to coarse grained sand (50%-65%) with gravel (30-45%) some cobbles, 5% fines, no gravel, trace fine and fine coarsening downward to medium grained sand below 52.4'. Light olive brown (2.5Y 5/4). (continued)	55
55			30/65/5	0.0	None None None	-	SP			60
60			/100/Tr						End of Boring - 62 feet	65
65										70
70										

Barr Engineering Co.
4700 W 77th St. Suite 200
Edina, MN 55435
Telephone: 952-832-2600
Fax: 952-862-2601



Remarks:
Headspace measured with PID. Lithologic unit thickness and percentage are approximate. After 16ft moisture difficult to determine due to water added to boring during drilling. Refusal at 62ft. "Tr" = trace.

BGS = "below ground surface"

Additional data may have been collected in the field which is not included on this log.

Client Cooper Industries/ABB
 Project Name Electric Machinery
 Number 23/73-016
 Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
 Drill Method Direct Push (Geoprobe)
 Drilling Started 7/29/08 Ended 7/29/08
 Logged By LML2

LOG OF GEOPROBE PB-2
 Unique Well No. --
DRAFT SHEET 1 OF 2
 Ground Surface Elevation --
 Top of Riser --
 Total Depth 52.0

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	%GR/SA/ FINEs	Headspace ppm	Discoloration- Odor- Sheen	Moisture	ASTM	LITHOLOGY	DESCRIPTION	DEPTH FEET	
5	-/95/5		0.0	None None None	Moist	SP			0-9.2': Fine to coarse grained sand, 5% fines (silt). 5% gravel from 4-9.2'. Rounded to subangular sand grains of quartz and felsic rock fragments. Very dark grayish brown (2.5Y 3/2) lightening to pale yellow (2.5Y 3/4).	5	
10	5/90/5		0.0	None None None	Moist				9.2-20': Fine grained to coarse grained sand with silt (10-15%). Trace gravel from 16-20', dark yellowish brown (10YR 4/4).	10	
15	-/90/10		0.0	None None None	Very Moist					15	
20	-/85/15		0.6	None None None	Moist	SP-SM				20	
25	Tr/85- 90/10- 15	Tr/100/Tr	1.3	None None None	Very Moist				20-21.2': Fine to medium grained sand lens with trace fines, distinct.	20	
25	Tr/85/15		0.4	None None None	Wet	SP			21.2-26': Fine grained to coarse grained sand with silt (10-15%), dark yellowish brown (10YR 4/4).	25	
30	Tr/70/30		0.4	None None None	Moist	SP-SM				26-36': Silty fine to coarse grained sand with trace gravel and 30% fines (silt & clay), dark grayish brown (2.5Y 4/2). Cobble encountered between 32-36'.	30
			0.0	None None None	Slight Moist						
			0.0	None None None	Moist	SM					

(continued)

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 Edina, MN 55435
 Telephone: 952-832-2600
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Remarks:
 Headspace measured with PID. Lithologic unit thickness and percentage are approximate. "Tr" = trace.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

Client Cooper Industries/ABB
 Project Name Electric Machinery
 Number 23/73-016
 Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
 Drill Method Direct Push (Geoprobe)
 Drilling Started 7/29/08 Ended 7/29/08
 Logged By LML2

LOG OF GEOPROBE PB-2
 Unique Well No. --
DRAFT SHEET 2 OF 2
 Ground Surface Elevation --
 Top of Riser --
 Total Depth 52.0

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	%GR/SA/ FINEs	Headspace ppm	Discoloration- Odor- Sheen	Moisture	ASTM	LITHOLOGY	DESCRIPTION	DEPTH FEET
35	Tr/70/30	0.3	None None	0.3	Moist		SM		26-36': Silty fine to coarse grained sand with trace gravel and 30% fines (silt & clay), dark grayish brown (2.5Y 4/2). Cobble encountered between 32-36'. (continued)	35
36	15/55/30	0.0	None None None	0.0	Moist					35
37	Tr/50/50	1.7	None None None	1.7	Moist		CH/CL		36-41.5': Sandy clay with trace gravel in the top 2', fine to coarse sand grains of quartz and rock fragments, 30%-50% sand and 50%-70% fines, fining downward, grayish brown (2.5Y 5/2).	40
38	-/45/55	0.7	None None None	0.7	Moist					40
39	-/30/70	0.0	None None	0.0	Moist					40
40	-/100/Tr	0.0	None None None None None None None None	0.0	Wet		SP		41.5-42': Fine grained sand with 2" clay lens, dark gray (5Y 4/1). 42-52': Sandy clay with trace gravel in the top 2', fine to coarse sand grains of quartz and rock fragments, 30% sand and 70% fines, fining downward, grayish brown (2.5Y 5/2).	45
41	-/30/70	0.0	None None None	0.0	Moist					45
42	-/30/70	0.0	None None None	0.0	Slight Moist		CL			45
43	-/30/70	0.0	None None None	0.0	Slight Moist					45
44	-/30/70	0.0	None None None	0.0	Slight Moist					45
45	-/30/70	0.0	None None None	0.0	Slight Moist					45
46	-/30/70	0.0	None None None	0.0	Slight Moist					45
47	-/30/70	0.0	None None None	0.0	Slight Moist					45
48	-/30/70	0.0	None None None	0.0	Slight Moist					45
49	-/30/70	0.0	None None None	0.0	Slight Moist					45
50	-/30/70	0.0	None None None	0.0	Slight Moist					50
51	-/30/70	0.0	None None None	0.0	Slight Moist					50
52	-/30/70	0.0	None None None	0.0	Slight Moist				End of Boring - 52 feet	55



Barr Engineering Co.
 4700 W 77th St. Suite 200
 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-862-2601

Remarks:
 Headspace measured with PID. Lithologic unit thickness and percentage are approximate. "Tr" = trace.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

Client Cooper Industries/ABB
 Project Name Electric Machinery
 Number 23/73-016
 Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
 Drill Method Direct Push (Geoprobe)
 Drilling Started 7/21/08 Ended 7/22/08
 Logged By LML2

LOG OF GEOPROBE PB-3
 Unique Well No. --
DRAFT SHEET 1 OF 3
 Ground Surface Elevation --
 Top of Riser --
 Total Depth 62.0

DEPTH FEET	SAMP. LENGTH & RECOVERY SAMP. NUMBER	Headspace ppm	Discoloration- Odor-Sheen	Moisture	ASTM	LITHOLOGY	DESCRIPTION	DEPTH FEET
5							0-0.26': Asphalt. 0.26-2.5': Black Clay.	
5.1							2.5-8': <5% fines, 10% fine graded sand, 80-85% medium-coarse sand.	5
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Client Cooper Industries/ABB
 Project Name Electric Machinery
 Number 23/73-016
 Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
 Drill Method Direct Push (Geoprobe)
 Drilling Started 7/21/08 Ended 7/22/08
 Logged By LML2

LOG OF GEOPROBE PB-3
 Unique Well No. --
DRAFT SHEET 2 OF 3
 Ground Surface Elevation --
 Top of Riser --
 Total Depth 62.0

DEPTH FEET	SAMP. LENGTH & RECOVERY SAMP. NUMBER	Headspace ppm	Discoloration- Odor-Sheen	Moisture	ASTM	LITHOLOGY	DESCRIPTION	DEPTH FEET
30		3.52	None	Wet			13.9-37.2': Sandy lean gray clay and silt with 30% fine to coarse grained sand decreasing to 20% in bottom 6', 10% fine gravel, subangular to subrounded grains/clasts, firm to hard, low plasticity, low toughness, grey (7.5YR 5/1) to dark gray (2.5Y 4/1). (continued)	30
		3.4	None None	Very Moist				
		5.9	None None	Very Moist				
		5.7	None None	Moist	CL			
		4.2	None None	Slight Moist				
		3.4	None None	Slight Moist				
		4.2	None None None None None	Moist-Wet				
		7.9						
		21.2	None None None	Wet			37.2-54': Poorly graded fine to coarse grained sand with ~5% fines and trace to 15% fine grained gravel, angular to subrounded sand and gravel grains, predominately quartz with some limestone and rock fragments throughout and mica in top 3', (2.5Y 4/2) dark grayish brown. Fines increase slightly from 45-50', silty sand lens present between 50-52'.	40
		18.9	None None None	Wet				
		22.7	None None None	Wet				
		7.9		Wet	SP			

(continued)

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 Edina, MN 55435
 Telephone: 952-832-2600
 Fax: 952-862-2601



Remarks:
 Headspace measured with FID. Lithologic unit thickness and percentage are approximate. FID used for headspace. Refusal at 62'.

BGS = "below ground surface"

Additional data may have been collected in the field which is not included on this log.

Client Cooper Industries/ABB
Project Name Electric Machinery
Number 23/73-016
Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
Drill Method Direct Push (Geoprobe)
Drilling Started 7/21/08 Ended 7/22/08
Logged By LML2

LOG OF GEOPROBE PB-3

Unique Well No.

DRAFT SHEET 3 OF 3

Ground Surface Elevation --
Top of Riser --
Total Depth 62.0



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Fax: 952-862-2601

Remarks:
Headspace measured with FID. Lithologic unit thickness and percentage are approximate. FID used for headspace. Refusal at 62'.

BGS = "below ground surface"

Additional data may have been collected in the field which is not included on this log.

Client Cooper Industries/ABB
 Project Name Electric Machinery
 Number 23/73-016
 Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
 Drill Method Direct Push (Geoprobe)
 Drilling Started 7/23/08 Ended 7/23/08
 Logged By LML2

LOG OF GEOPROBE PB-4
 Unique Well No. --
DRAFT SHEET 1 OF 2
 Ground Surface Elevation --
 Top of Riser --
 Total Depth 52.0

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	%GR/SA/ FINEs	Headspace ppm	Discoloration- Odor- Sheen	Moisture	ASTM	LITHOLOGY	DESCRIPTION	DEPTH FEET
5			10/80/Tr	0.0	None None None	Moist			0-16': Fine to coarse grained sand, 0-10% gravel and subrounded grains/clasts, mainly quartz sand with some rock fragments (5%), gravel increasing in bottom 15%, top 1" asphalt. Silty lenses present from 10-16'. Dark yellowish brown (10YR 4/6) with some very dark grayish brown (2.5Y 3/2) layers between 10' and 12'.	5
10			5/90/5- 10	0.0	None None None	Moist	SP			10
15			-/95/5 Tr/90- 95/5-10	0.0	None None None	Wet				15
20			-/90/10 15/75- 80/5-10	0.0	None None None	Moist				20
25			-/50/50	0.0	None None None	Moist			16-39.5': Sandy lean clay, sand is fine to coarse grained, subrounded, grayish brown (10YR 5/2) to dark grayish brown (2.5Y 4/2) from 38-39.5', 30-50% sand. Gravel lens.	25
				0.0	None None None	Very Moist	CL		24-32': Trace gravel present in clay.	
				0.0	None None None	Very Moist			28-30.5': No recovery because hit rock.	

(continued)



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 Fax: 952-862-2601

Remarks:
 Headspace measured with PID. Lithologic unit thickness and percentage are approximate. Refusal at 52'. "Tr" = trace.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

Client Cooper Industries/ABB
 Project Name Electric Machinery
 Number 23/73-016
 Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
 Drill Method Direct Push (Geoprobe)
 Drilling Started 7/23/08 Ended 7/23/08
 Logged By LML2

LOG OF GEOPROBE PB-4
 Unique Well No. --
DRAFT SHEET 2 OF 2
 Ground Surface Elevation --
 Top of Riser --
 Total Depth 52.0

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	%GR/SA/ FINEs	Headspace ppm	Discoloration- Odor- Sheen	Moisture	ASTM	LITHOLOGY	DESCRIPTION	DEPTH FEET
35				0.0	None None None	Moist		CL	16-39.5': Sandy lean clay, sand is fine to coarse grained, subrounded, grayish brown (10YR 5/2) to dark grayish brown (2.5Y 4/2) from 38-39.5', 30-50% sand.(continued)	35
36-38'				0.0	None None None	Moist			Not sampled.	
40	-/30/70		0.0	0.0	None None None None None None None None	Moist		SP	39.5-45.5': Fine to medium grained sand, dark gray (5Y 4/1), 0% gravel. Silt increases from trace to 5% by 40'. 40-41': Could not see structure due to core disturbance in 40-42' drive.	40
42-44'	-/100/Tr		0.0	0.0	None None None None None None None None	Moist			Not sampled.	
44-48'	-/95/5		0.0	0.0	None None None None None None None None	Very Moist		ML	44-48': Sand becomes all fine grained, some 1/2" clay lenses.	45
45				0.0	None None None	Wet			45.5-47': Silt with fine sand, grayish brown (2.5Y 5/2), 0% gravel, 20% sand.	45
47-52'	-/20/80		0.0	0.0	None None None	Moist		CL/CH	47-52': Clay with trace coarse sand and 5-10% fine sand, dark gray (5Y 4/1).	50
52	-/5- 10/90- 95		0.0	0.0	None None None	Moist			End of Boring - 52 feet	55



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Remarks:
 Headspace measured with PID. Lithologic unit thickness and percentage are approximate. Refusal at 52'. "Tr" = trace.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

Client Cooper Industries/ABB
 Project Name Electric Machinery
 Number 23/73-016
 Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
 Drill Method Direct Push (Geoprobe)
 Drilling Started 7/23/08 Ended 7/23/08
 Logged By LML2

LOG OF GEOPROBE PB-5
 Unique Well No.
DRAFT SHEET 1 OF 1
 Ground Surface Elevation --
 Top of Riser --
 Total Depth 30.0

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	%GR/SA/ FINEs	Headspace ppm	Discoloration- Odor- Sheen	Moisture	ASTM	LITHOLOGY	DESCRIPTION	DEPTH FEET
0	-/90/10			3.5	None None None	Moist			0-0.3' Asphalt. 0.3-4': Fine to coarse grained sand with silt, subangular grains, ~40% of silt is organic mineralogy, sand is mainly quartz with rock fragments and mica, light yellowish brown (10YR 6/4). Organic silt and silt lenses up to 3" thick; colors range from black to dark brown to tan.	
5				0.0	None None None	Slight Moist			4-23.2': Fine to coarse grained sand, subrounded to subangular grains, mainly quartz. Drilled through granite cobble at 4'.	5
10				0.0	None None None	Slight Moist				10
15				0.0	None None None	Slight Moist	SP			15
20				0.0	None None None	Slight Moist				20
25				1922	None Strong Light None None None	Slight Moist to Wet	Wet		23.2-24': Fine to coarse grained sand with silt and clay, dark grayish brown (2.5Y 4/2), <20% fines. 24-30': Fine to coarse grained sand with silt and fine gravel, brown.	25
				2.4			Wet			
				0.0	None None None	Wet				
									End of Boring - 30 feet	



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Remarks:
 Headspace measured with PID. Lithologic unit thickness and percentage are approximate. Other geologist onsite recalled trace to 10% fine gravel throughout.
 "Tr" = trace.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

Client Cooper Industries/ABB
 Project Name Electric Machinery
 Number 23/73-016
 Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
 Drill Method Direct Push (Geoprobe)
 Drilling Started 7/28/08 Ended 7/28/08
 Logged By LML2

LOG OF GEOPROBE PB-6
 Unique Well No. --
DRAFT SHEET 1 OF 1
 Ground Surface Elevation --
 Top of Riser --
 Total Depth 30.0

DEPTH FEET	SAMP. LENGTH & RECOVERY	SAMP. NUMBER	%GR/SA/ FINEs	Headspace ppm	Discoloration- Odor- Sheen	Moisture	ASTM	LITHOLOGY	DESCRIPTION	DEPTH FEET
0	-/60- 70/30- 40	Tr/95/5	0.0	None None None	None	Slight Moist			0-0.3': Asphalt. 0.3-17.9': Fine to coarse grained to fine to medium grained sand with trace to 5% fines and 0% to trace gravel. Sand grains are subangular to subrounded, mainly quartz, some iron oxide present in fines component. Color ranges with depth from light grey (10YR 7/2) to light yellowish brown (10YR 6/4), to dark brown (7.5YR 3/4), to pale yellow (2.5Y 8/3). Lenses of silty sand present at 1.5-1.8' and 16-16.8'. Silty sand lens at 1.5' is dark grayish brown (2.5Y 4/2).	5
5	-/95/5	-/100/Tr	0.0	None None None	None	Slight Moist				10
10	-/70/30	Tr/40/60	0.0	None None None	None	Slight Moist	SP to SP-SM			15
15	-/100/Tr	-/95/5	0.0	None None V. Light	None	Slight Moist	ML		17.9-19': Sand is composed of fine to coarse angular grains of quartz, limestone, and feric rock fragments, trace limestone gravel is present. Olive brown (2.5Y 5/3). 19-30': Fine to coarse grained sand to sand with silt, subrounded to subangular grains of quartz and rock fragments with fine grained component gradually increasing with depth from trace to 5% at the top to 15% from 20-30'. Color changes with depth from brown (10YR 5/3) to light gray (7.5YR 7/1) to gray (2.5Y 5/1).	20
20	-/95- 100/Tr- 5	Tr/85/15	0.0	None None None	None	Wet	SP to SP-SM			25
25									End of Boring - 30 feet	



Client Cooper Industries/ABB
 Project Name Electric Machinery
 Number 23/73-016
 Location St. Cloud, MN

Drill Contractor Matrix Environmental LLC
 Drill Method Direct Push (Geoprobe)
 Drilling Started 7/30/08 Ended 7/30/08
 Logged By LML2

LOG OF GEOPROBE PB-7
 Unique Well No. --
DRAFT SHEET 1 OF 1
 Ground Surface Elevation --
 Top of Riser --
 Total Depth 30.0

DEPTH FEET	SAMP. LENGTH & RECOVERY SAMP. NUMBER	%GR/SA/ FINE\$	Headspace ppm	Discoloration- Odor- Sheen	Moisture	ASTM	LITHOLOGY	DESCRIPTION	DEPTH FEET
5		-/90- 95/5-10	60.8	None None None	Moist			0-23.5': Sand with variable amounts of silt. Sand grain size varies in zones between fine to coarse and fine to medium, subrounded to subangular grains of quartz and rock fragments (10YR 4/3). 2-2.3': Slightly more silt, blacker in color and has very slight petroleum odor.	5
10		-/95/5	2.6	None None None	Slight Moist				10
15	Tr/100/Tr	2.2		None None None	Slight Moist	SP to SP-SM			15
20	15/85/Tr	2.4		None None None	Slight Moist			12.9-13.1': Drilled through granite cobble.	20
25	5/95/Tr	2.2		None None None	Slight Moist				25
	Tr/90- 95/5-10			None None None					
	40/35/25	310		None Slight None None None	Wet	GP	○ ○	23.5-30': Gravel with sand and clay or silt. Top third of the interval is dark grey (2.5Y 4/1) and has fine to medium grained sand and clay nodules; bottom half of the interval is light olive brown (2.5Y 5/3) and has fine to coarse grained sand and silt. Gravel is composed of subangular grains of quartz, basalt, greenstone and chert. Clay nodules are gray (2.5Y 4/1) and yellow (2.5Y 7/8). Sand is fine to coarse grained with subrounded to subangular grains.	
	50/40/10	9.7		None None None	Wet	GP	○ ○	25.2-30': Sand with silt, gravel content decreases with depth. Silt increases slightly below 29.2', cobble at 29.6-30', light olive brown (2.5Y 5/3).	
	15/70/15			None None None	Wet				
	Tr/90/10	4.4		None None None	Wet			End of Boring - 30 feet	



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Remarks:
 Headspace measured with PID. Lithologic unit thickness and percentage are approximate. "Tr" = trace.

BGS = "below ground surface"
 Additional data may have been collected in the field which is not included on this log.

Appendix D

Field Data Sheets – Annual Groundwater Monitoring

July 30, 2008

Client Services
Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601

RE: Project: 23/73-0162007101
Pace Project No.: 1077726

Dear Client Services:

Enclosed are the analytical results for sample(s) received by the laboratory on July 25, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Shanna Miller

shanna.miller@pacelabs.com
Project Manager

Florida (Nelap) Certification #: E87605
Illinois Certification #: 200011
Iowa Certification #: 368
Minnesota Certification #: 027-053-137
Wisconsin Certification #: 999407970

Enclosures

REPORT OF LABORATORY ANALYSIS

Page 1 of 10

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SAMPLE SUMMARY

Project: 23/73-0162007101

Pace Project No.: 1077726

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1077726001	PB-5,20-24'	Solid	07/24/08 14:24	07/25/08 14:01
1077730008	TRIP BLANK	Solid	07/24/08 00:00	07/25/08 14:01

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 23/73-0162007101

Pace Project No.: 1077726

Lab ID	Sample ID	Method	Analysts	Analytes Reported
1077726001	PB-5,20-24'	% Moisture	RRN	1
		EPA 8260	DJT	17
1077730008	TRIP BLANK	EPA 8260	DJT	17

REPORT OF LABORATORY ANALYSIS

Page 3 of 10

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PROJECT NARRATIVE

Project: 23/73-0162007101

Pace Project No.: 1077726

Method: % Moisture

Description: Dry Weight

Client: PASI Pittsburgh

Date: July 30, 2008

General Information:

1 sample was analyzed for % Moisture. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

Page 4 of 10

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PROJECT NARRATIVE

Project: 23/73-0162007101

Pace Project No.: 1077726

Method: **EPA 8260**

Description: 8260 MSV 5030 Med Level

Client: PASI Pittsburgh

Date: July 30, 2008

General Information:

2 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

Page 5 of 10

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ANALYTICAL RESULTS

Project: 23/73-0162007101

Pace Project No.: 1077726

Sample: PB-5,20-24' Lab ID: 1077726001 Collected: 07/24/08 14:24 Received: 07/25/08 14:01 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	7.3 %		0.10	1		07/25/08 00:00		
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Benzene	ND ug/kg		54.4	1	07/28/08 00:00	07/29/08 20:17	71-43-2	
Chloroform	ND ug/kg		218	1	07/28/08 00:00	07/29/08 20:17	67-66-3	
Chloromethane	ND ug/kg		218	1	07/28/08 00:00	07/29/08 20:17	74-87-3	
1,1-Dichloroethane	ND ug/kg		218	1	07/28/08 00:00	07/29/08 20:17	75-34-3	
1,2-Dichloroethane	ND ug/kg		218	1	07/28/08 00:00	07/29/08 20:17	107-06-2	
1,1-Dichloroethene	ND ug/kg		218	1	07/28/08 00:00	07/29/08 20:17	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		218	1	07/28/08 00:00	07/29/08 20:17	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		218	1	07/28/08 00:00	07/29/08 20:17	156-60-5	
1,4-Dioxane (p-Dioxane)	ND ug/kg		4350	1	07/28/08 00:00	07/29/08 20:17	123-91-1	
Tetrachloroethene	ND ug/kg		218	1	07/28/08 00:00	07/29/08 20:17	127-18-4	
1,1,1-Trichloroethane	ND ug/kg		218	1	07/28/08 00:00	07/29/08 20:17	71-55-6	
Trichloroethene	ND ug/kg		218	1	07/28/08 00:00	07/29/08 20:17	79-01-6	
Vinyl chloride	ND ug/kg		54.4	1	07/28/08 00:00	07/29/08 20:17	75-01-4	
Dibromofluoromethane (S)	102 %		74-125	1	07/28/08 00:00	07/29/08 20:17	1868-53-7	
Toluene-d8 (S)	104 %		75-127	1	07/28/08 00:00	07/29/08 20:17	2037-26-5	
4-Bromofluorobenzene (S)	93 %		75-125	1	07/28/08 00:00	07/29/08 20:17	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		75-125	1	07/28/08 00:00	07/29/08 20:17	17060-07-0	

Date: 07/30/2008 09:19 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007101

Pace Project No.: 1077726

Sample: TRIP BLANK Lab ID: **1077730008** Collected: 07/24/08 00:00 Received: 07/25/08 14:01 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B						
Benzene	ND ug/kg		50.0	1	07/28/08 00:00	07/29/08 19:54	71-43-2	
Chloroform	ND ug/kg		200	1	07/28/08 00:00	07/29/08 19:54	67-66-3	
Chloromethane	ND ug/kg		200	1	07/28/08 00:00	07/29/08 19:54	74-87-3	
1,1-Dichloroethane	ND ug/kg		200	1	07/28/08 00:00	07/29/08 19:54	75-34-3	
1,2-Dichloroethane	ND ug/kg		200	1	07/28/08 00:00	07/29/08 19:54	107-06-2	
1,1-Dichloroethene	ND ug/kg		200	1	07/28/08 00:00	07/29/08 19:54	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		200	1	07/28/08 00:00	07/29/08 19:54	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		200	1	07/28/08 00:00	07/29/08 19:54	156-60-5	
1,4-Dioxane (p-Dioxane)	ND ug/kg		4000	1	07/28/08 00:00	07/29/08 19:54	123-91-1	
Tetrachloroethene	ND ug/kg		200	1	07/28/08 00:00	07/29/08 19:54	127-18-4	
1,1,1-Trichloroethane	ND ug/kg		200	1	07/28/08 00:00	07/29/08 19:54	71-55-6	
Trichloroethene	ND ug/kg		200	1	07/28/08 00:00	07/29/08 19:54	79-01-6	
Vinyl chloride	ND ug/kg		50.0	1	07/28/08 00:00	07/29/08 19:54	75-01-4	
Dibromofluoromethane (S)	101 %		74-125	1	07/28/08 00:00	07/29/08 19:54	1868-53-7	
Toluene-d8 (S)	104 %		75-127	1	07/28/08 00:00	07/29/08 19:54	2037-26-5	
4-Bromofluorobenzene (S)	98 %		75-125	1	07/28/08 00:00	07/29/08 19:54	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		75-125	1	07/28/08 00:00	07/29/08 19:54	17060-07-0	

Date: 07/30/2008 09:19 AM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 23/73-0162007101

Pace Project No.: 1077726

QC Batch:	MPRP/12786	Analysis Method:	% Moisture
QC Batch Method:	% Moisture	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	1077726001		

SAMPLE DUPLICATE: 505584

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.3	9.2	23	30	

SAMPLE DUPLICATE: 505585

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	8.5	7.2	15	30	

Date: 07/30/2008 09:19 AM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 23/73-0162007101

Pace Project No.: 1077726

QC Batch: MSV/10538 Analysis Method: EPA 8260

QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV 5030 Med Level

Associated Lab Samples: 1077726001, 1077730008

METHOD BLANK: 506034

Associated Lab Samples: 1077726001, 1077730008

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	200	
1,1-Dichloroethane	ug/kg	ND	200	
1,1-Dichloroethene	ug/kg	ND	200	
1,2-Dichloroethane	ug/kg	ND	200	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	4000	
Benzene	ug/kg	ND	50.0	
Chloroform	ug/kg	ND	200	
Chloromethane	ug/kg	ND	200	
cis-1,2-Dichloroethene	ug/kg	ND	200	
Tetrachloroethene	ug/kg	ND	200	
trans-1,2-Dichloroethene	ug/kg	ND	200	
Trichloroethene	ug/kg	ND	200	
Vinyl chloride	ug/kg	ND	50.0	
1,2-Dichloroethane-d4 (S)	%	99	75-125	
4-Bromofluorobenzene (S)	%	97	75-125	
Dibromofluoromethane (S)	%	97	74-125	
Toluene-d8 (S)	%	101	75-127	

LABORATORY CONTROL SAMPLE & LCSD: 506035

506036

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	1000	976	982	98	98	75-135	.7	20	
1,1-Dichloroethane	ug/kg	1000	977	984	98	98	75-130	.8	20	
1,1-Dichloroethene	ug/kg	1000	1240	1220	124	122	75-129	.9	20	
1,2-Dichloroethane	ug/kg	1000	997	998	100	100	75-130	.09	20	
1,4-Dioxane (p-Dioxane)	ug/kg	20000	19800	20700	99	103	50-150	4	20	
Benzene	ug/kg	1000	971	987	97	99	75-129	2	20	
Chloroform	ug/kg	1000	1020	1020	102	102	75-134	.06	20	
Chloromethane	ug/kg	1000	674	647	67	65	52-141	4	20	
cis-1,2-Dichloroethene	ug/kg	1000	1000	1020	100	102	75-129	1	20	
Tetrachloroethene	ug/kg	1000	959	949	96	95	75-130	1	20	
trans-1,2-Dichloroethene	ug/kg	1000	926	987	93	99	75-126	6	20	
Trichloroethene	ug/kg	1000	969	973	97	97	75-133	.5	20	
Vinyl chloride	ug/kg	1000	718	707	72	71	64-137	2	20	
1,2-Dichloroethane-d4 (S)	%				96	96	75-125			
4-Bromofluorobenzene (S)	%				97	96	75-125			
Dibromofluoromethane (S)	%				98	99	74-125			
Toluene-d8 (S)	%				100	102	75-127			

Date: 07/30/2008 09:19 AM

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 23/73-0162007101

Pace Project No.: 1077726

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

Chain of Custody

BARR

4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

Project Number

23 / 73 - 0162007101

Project Name

Electric Machinery Site No 25279

Sample Identification	Collection		Matrix	Number of Containers/Preservative					COC 1 of 1
				Water	Soil	Grab	Comp.	QC	
	Date	Time							
1. PB-5, 0-4'	7/24/08	14:00	X	X					
2. PB-5, 4-8'	7/24/08	14:06	X	Y					
3. PB-5, 8-12'	7/24/08	14:09	X	X					
4. PB-5, 12-16'	7/24/08	14:13	X	X					
5. PB-5, 16-20'	7/24/08	14:18	X	X					
6. PB-5, 20-24'	7/24/08	14:24	X	X	↑ Rushed to Andrea Nord 7/25				
7. PB-5, 24-26'	7/24/08	14:30	X	X	4:30 PM DRI				
8. PB-5, 26-30'	7/24/08	14:37	X	X					
9. Tip blank				X					
10.									
11.									
12.									

Common Parameter/Container - Preservation Key

*1 - Volatile Organics = BTEX, GRO, TPH, Full List

*2 - Semivolatile Organics = PAHs, PCP, Dioxins, Full List, Herbicide/Pesticide/PCBs

*3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate

*4 - Nutrients = COD, TOC, Phenols, Ammonia

Nitrogen, TKN

Relinquished By:

S. J. P.

On Ice?

Y N

Date

7/25/08

Time

03:00

Received by:

H. M. P.

Date

7/25/08

Time

14:01

Relinquished By:

S. J. P.

On Ice?

Y N

Date

Time

Received by:

Date

Time

Samples Shipped VIA: Air Freight Federal Express Sampler

Other *Road Runner*

Air Bill Number:

T-199

1077726

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

Project Manager: *MCF*

Project Contact: *AAN*

Sampled by: *LMLZ/KAM*

Laboratory: *PAGE*

Remarks:

~~Site specific~~
VOC -
(See Table 1 attached)

Hold All Samples

Call Andrea Nord

for Sample Selection

Sample Condition Upon Receipt

Pace Analytical

Client Name: BARR

Project #

1077726

Courier: Fed Ex UPS USPS Client Commercial Pace OtherRenee ParkerOptional
Proj. Due Date:
Proj. Name:

Tracking #:

Custody Seal on Cooler/Box Present: yes no Seals intact: yes noPacking Material: Bubble Wrap Bubble Bags None Other

Temp Blank: Yes _____ No _____

Thermometer Used 80344042-179425Type of Ice: Wet Blue None Samples on ice, cooling process has begunCooler Temperature 1794251.9Biological Tissue Is Frozen: Yes NoDate and Initials of person examining contents: 7-25-08 RL

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>SL</u>	
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Per method, VOA preservation is checked after analysis		Initial when completed Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	<u>Client Generation TB.</u>
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Andrea Novak Date/Time: 7/25/08 DAJComments/ Resolution: - 1,4 dioxane - appears to be on Pace list but not available to login.Rush item 6 BB-5 20-24 urgent Rush ASNP. Offered Tues/wa As best estimate.1,4 dioxane is ok to run. seen 7/20/08

Project Manager Review:

Dawn AndersonDate: 7/25/08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

August 04, 2008

Client Services
Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601

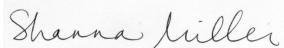
RE: Project: 23/73-0162007102
Pace Project No.: 1077802

Dear Client Services:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Shanna Miller

shanna.miller@pacelabs.com
Project Manager

Florida (Nelap) Certification #: E87605
Illinois Certification #: 200011
Iowa Certification #: 368
Minnesota Certification #: 027-053-137
Wisconsin Certification #: 999407970

Enclosures

REPORT OF LABORATORY ANALYSIS

Page 1 of 12

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SAMPLE SUMMARY

Project: 23/73-0162007102

Pace Project No.: 1077802

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1077802002	PB-4,39'-43'	Water	07/28/08 13:15	07/29/08 09:23
1077802003	TRIP BLANK	Water		07/29/08 09:23

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 23/73-0162007102

Pace Project No.: 1077802

Lab ID	Sample ID	Method	Analysts	Analytes Reported
1077802002	PB-4,39'-43'	EPA 8260	JMW	17
1077802003	TRIP BLANK	EPA 8260	CNC	17

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007102

Pace Project No.: 1077802

Method: **EPA 8260**

Description: 8260 MSV

Client: PASI Pittsburgh

Date: August 04, 2008

General Information:

2 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: MSV/10552

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- LCSD (Lab ID: 506934)
- 1,4-Dioxane (p-Dioxane)

QC Batch: MSV/10571

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCSD (Lab ID: 508250)
- Vinyl chloride

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- LCS (Lab ID: 508249)
- 1,4-Dioxane (p-Dioxane)

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007102

Pace Project No.: 1077802

Method: EPA 8260

Description: 8260 MSV

Client: PASI Pittsburgh

Date: August 04, 2008

QC Batch: MSV/10571

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 1077813015

M0: Matrix spike recovery was outside laboratory control limits.

- MS (Lab ID: 508251)
 - 1,4-Dioxane (p-Dioxane)
- MSD (Lab ID: 508252)
 - 1,4-Dioxane (p-Dioxane)

P6: Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

- MS (Lab ID: 508251)
 - cis-1,2-Dichloroethene
- MSD (Lab ID: 508252)
 - cis-1,2-Dichloroethene

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007102

Pace Project No.: 1077802

Sample: PB-4,39'-43'	Lab ID: 1077802002	Collected: 07/28/08 13:15	Received: 07/29/08 09:23	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/01/08 19:31	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/01/08 19:31	67-66-3	
Chloromethane	1.3	ug/L	1.0	1		08/01/08 19:31	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/01/08 19:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/01/08 19:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/01/08 19:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/01/08 19:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/01/08 19:31	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/01/08 19:31	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/01/08 19:31	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/01/08 19:31	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/01/08 19:31	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/01/08 19:31	75-01-4	
1,2-Dichloroethane-d4 (S)	94 %		75-125	1		08/01/08 19:31	17060-07-0	
Dibromofluoromethane (S)	96 %		75-125	1		08/01/08 19:31	1868-53-7	
4-Bromofluorobenzene (S)	102 %		75-125	1		08/01/08 19:31	460-00-4	
Toluene-d8 (S)	94 %		75-125	1		08/01/08 19:31	2037-26-5	

Date: 08/04/2008 03:34 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007102

Pace Project No.: 1077802

Sample: TRIP BLANK	Lab ID: 1077802003	Collected:	Received: 07/29/08 09:23	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		07/30/08 16:57	71-43-2	
Chloroform	ND	ug/L	1.0	1		07/30/08 16:57	67-66-3	
Chloromethane	ND	ug/L	1.0	1		07/30/08 16:57	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		07/30/08 16:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		07/30/08 16:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		07/30/08 16:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		07/30/08 16:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		07/30/08 16:57	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		07/30/08 16:57	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		07/30/08 16:57	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		07/30/08 16:57	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		07/30/08 16:57	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		07/30/08 16:57	75-01-4	
1,2-Dichloroethane-d4 (S)	105 %		75-125	1		07/30/08 16:57	17060-07-0	
Dibromofluoromethane (S)	99 %		75-125	1		07/30/08 16:57	1868-53-7	
4-Bromofluorobenzene (S)	102 %		75-125	1		07/30/08 16:57	460-00-4	
Toluene-d8 (S)	101 %		75-125	1		07/30/08 16:57	2037-26-5	

Date: 08/04/2008 03:34 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 23/73-0162007102

Pace Project No.: 1077802

QC Batch:	MSV/10552	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	1077802003		

METHOD BLANK: 506932

Associated Lab Samples: 1077802003

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	
1,1-Dichloroethane	ug/L	ND	1.0	
1,1-Dichloroethene	ug/L	ND	1.0	
1,2-Dichloroethane	ug/L	ND	1.0	
1,4-Dioxane (p-Dioxane)	ug/L	ND	80.0	
Benzene	ug/L	ND	1.0	
Chloroform	ug/L	ND	1.0	
Chloromethane	ug/L	ND	1.0	
cis-1,2-Dichloroethene	ug/L	ND	1.0	
Tetrachloroethene	ug/L	ND	1.0	
trans-1,2-Dichloroethene	ug/L	ND	1.0	
Trichloroethene	ug/L	ND	1.0	
Vinyl chloride	ug/L	ND	0.40	
1,2-Dichloroethane-d4 (S)	%	106	75-125	
4-Bromofluorobenzene (S)	%	103	75-125	
Dibromofluoromethane (S)	%	95	75-125	
Toluene-d8 (S)	%	99	75-125	

LABORATORY CONTROL SAMPLE & LCSD: 506933 506934

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.7	19.2	99	96	75-132	3	20	
1,1-Dichloroethane	ug/L	20	19.4	19.9	97	99	75-125	2	20	
1,1-Dichloroethene	ug/L	20	19.0	17.8	95	89	75-127	6	20	
1,2-Dichloroethane	ug/L	20	20.2	20.8	101	104	75-125	3	20	
1,4-Dioxane (p-Dioxane)	ug/L	400	453	551	113	138	70-126	19	20	L3
Benzene	ug/L	20	19.6	19.7	98	98	75-125	.4	20	
Chloroform	ug/L	20	19.6	20.4	98	102	75-125	4	20	
Chloromethane	ug/L	20	19.3	18.9	97	95	67-135	2	20	
cis-1,2-Dichloroethene	ug/L	20	19.9	20.9	99	105	75-125	5	20	
Tetrachloroethene	ug/L	20	19.1	19.4	96	97	75-125	1	20	
trans-1,2-Dichloroethene	ug/L	20	20.0	19.1	100	96	75-125	5	20	
Trichloroethene	ug/L	20	19.8	19.2	99	96	75-125	3	20	
Vinyl chloride	ug/L	20	19.0	18.4	95	92	71-133	3	20	
1,2-Dichloroethane-d4 (S)	%				94	96	75-125			
4-Bromofluorobenzene (S)	%				99	109	75-125			
Dibromofluoromethane (S)	%				95	98	75-125			
Toluene-d8 (S)	%				94	102	75-125			

Date: 08/04/2008 03:34 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 23/73-0162007102

Pace Project No.: 1077802

MATRIX SPIKE SAMPLE:	507355						
Parameter	Units	1077813001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	20	21.4	107	75-140	
1,1-Dichloroethane	ug/L	ND	20	20.8	104	70-140	
1,1-Dichloroethene	ug/L	ND	20	22.3	112	75-141	
1,2-Dichloroethane	ug/L	ND	20	19.6	98	75-130	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	489	122	63-128	
Benzene	ug/L	ND	20	20.9	104	75-126	
Chloroform	ug/L	ND	20	19.9	99	75-134	
Chloromethane	ug/L	ND	20	24.9	124	61-148	
cis-1,2-Dichloroethene	ug/L	ND	20	20.6	103	65-148	
Tetrachloroethene	ug/L	ND	20	20.9	104	75-133	
trans-1,2-Dichloroethene	ug/L	ND	20	22.1	110	75-138	
Trichloroethene	ug/L	ND	20	20.9	104	75-130	
Vinyl chloride	ug/L	ND	20	26.3	132	64-150	
1,2-Dichloroethane-d4 (S)	%				94	75-125	
4-Bromofluorobenzene (S)	%				100	75-125	
Dibromofluoromethane (S)	%				102	75-125	
Toluene-d8 (S)	%				94	75-125	

SAMPLE DUPLICATE: 507354

Parameter	Units	1077510009 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	ND	0	30	
1,1-Dichloroethane	ug/L	ND	ND	0	30	
1,1-Dichloroethene	ug/L	ND	ND	0	30	
1,2-Dichloroethane	ug/L	ND	ND	0	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	ND	0	30	
Benzene	ug/L	710	711	.1	30	
Chloroform	ug/L	ND	ND	0	30	
Chloromethane	ug/L	ND	ND	0	30	
cis-1,2-Dichloroethene	ug/L	ND	ND	0	30	
Tetrachloroethene	ug/L	ND	ND	0	30	
trans-1,2-Dichloroethene	ug/L	ND	ND	0	30	
Trichloroethene	ug/L	ND	ND	0	30	
Vinyl chloride	ug/L	ND	ND	0	30	
1,2-Dichloroethane-d4 (S)	%	97	108	11		
4-Bromofluorobenzene (S)	%	99	102	3		
Dibromofluoromethane (S)	%	90	98	8		
Toluene-d8 (S)	%	95	102	7		

Date: 08/04/2008 03:34 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 23/73-0162007102

Pace Project No.: 1077802

QC Batch:	MSV/10571	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	1077802002		

METHOD BLANK: 508248

Associated Lab Samples: 1077802002

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	
1,1-Dichloroethane	ug/L	ND	1.0	
1,1-Dichloroethene	ug/L	ND	1.0	
1,2-Dichloroethane	ug/L	ND	1.0	
1,4-Dioxane (p-Dioxane)	ug/L	ND	80.0	
Benzene	ug/L	ND	1.0	
Chloroform	ug/L	ND	1.0	
Chloromethane	ug/L	ND	1.0	
cis-1,2-Dichloroethene	ug/L	ND	1.0	
Tetrachloroethene	ug/L	ND	1.0	
trans-1,2-Dichloroethene	ug/L	ND	1.0	
Trichloroethene	ug/L	ND	1.0	
Vinyl chloride	ug/L	ND	0.40	
1,2-Dichloroethane-d4 (S)	%	88	75-125	
4-Bromofluorobenzene (S)	%	102	75-125	
Dibromofluoromethane (S)	%	95	75-125	
Toluene-d8 (S)	%	95	75-125	

LABORATORY CONTROL SAMPLE & LCSD: 508249 508250

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.1	15.8	90	79	75-132	13	20	
1,1-Dichloroethane	ug/L	20	17.8	16.7	89	84	75-125	6	20	
1,1-Dichloroethene	ug/L	20	18.2	15.7	91	79	75-127	15	20	
1,2-Dichloroethane	ug/L	20	18.5	17.8	92	89	75-125	4	20	
1,4-Dioxane (p-Dioxane)	ug/L	400	515	481	129	120	70-126	7	20	L3
Benzene	ug/L	20	19.4	17.9	97	90	75-125	8	20	
Chloroform	ug/L	20	18.5	17.3	92	87	75-125	6	20	
Chloromethane	ug/L	20	17.1	14.7	85	74	67-135	15	20	
cis-1,2-Dichloroethene	ug/L	20	19.3	18.1	96	90	75-125	7	20	
Tetrachloroethene	ug/L	20	18.2	15.6	91	78	75-125	15	20	
trans-1,2-Dichloroethene	ug/L	20	18.6	16.5	93	82	75-125	12	20	
Trichloroethene	ug/L	20	19.0	16.2	95	81	75-125	16	20	
Vinyl chloride	ug/L	20	16.4	13.7	82	69	71-133	18	20	L2
1,2-Dichloroethane-d4 (S)	%				94	91	75-125			
4-Bromofluorobenzene (S)	%				109	105	75-125			
Dibromofluoromethane (S)	%				107	99	75-125			
Toluene-d8 (S)	%				105	96	75-125			

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QUALITY CONTROL DATA

Project: 23/73-0162007102

Pace Project No.: 1077802

Parameter	Units	1077813015		MSD		508252					
		Result	Spike Conc.	Spike Conc.	MS Result	MSD	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD
1,1,1-Trichloroethane	ug/L	ND	100	100	101	98.1	101	98	75-140	3	30
1,1-Dichloroethane	ug/L	ND	100	100	98.3	95.8	98	96	70-140	3	30
1,1-Dichloroethene	ug/L	ND	100	100	107	99.3	107	99	75-141	7	30
1,2-Dichloroethane	ug/L	ND	100	100	95.9	92.7	96	93	75-130	3	30
1,4-Dioxane (p-Dioxane)	ug/L	ND	2000	2000	2840	2860	142	143	63-128	.7	30 M0
Benzene	ug/L	ND	100	100	106	103	106	103	75-126	3	30
Chloroform	ug/L	ND	100	100	98.9	96.6	99	97	75-134	2	30
Chloromethane	ug/L	ND	100	100	96.7	94.0	97	94	61-148	3	30
cis-1,2-Dichloroethene	ug/L	570	100	100	622	605	52	35	65-148	3	30 P6
Tetrachloroethene	ug/L	ND	100	100	104	95.8	101	93	75-133	8	30
trans-1,2-Dichloroethene	ug/L	13.4	100	100	115	112	102	98	75-138	3	30
Trichloroethene	ug/L	180	100	100	257	255	77	75	75-130	1	30
Vinyl chloride	ug/L	31.0	100	100	116	115	85	84	64-150	1	30
1,2-Dichloroethane-d4 (S)	%						97	94	75-125		
4-Bromofluorobenzene (S)	%						113	103	75-125		
Dibromofluoromethane (S)	%						105	101	75-125		
Toluene-d8 (S)	%						101	98	75-125		

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QUALIFIERS

Project: 23/73-0162007102

Pace Project No.: 1077802

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

M0 Matrix spike recovery was outside laboratory control limits.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

BARRChain of Custody

4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

Project Number

23173-0162007102

Project Name

No 26353

Sample Identification	Collection		Matrix	Type	Number of Containers/Preservative										COC <u>1</u> of <u>1</u>					
					Water	Soil	Grab	Comp.	QC	Volatile Organics (Pres.) *1	Semivolatile Organics *2	Dissolved Metals (HNO ₃)	Total Metals (HNO ₃)	General (Unpreserved) *3	Cyanide (NaOH)	Nutrients (H ₂ SO ₄) *4	Oil and Grease (H ₂ SO ₄)	Sulfide (Zn Acetate)	Methane	Bacteria (Na ₂ S ₂ O ₃)
	Date	Time																Total No. Of Containers		
1. FB+	7/28/08	9:20	X	X	3	3												3	Analyte for TO 15, short list (see attached Table 1)	
2. PB-4, 39'-43'	7/28/08	13:15	X	X	3													3	Sample foams, high sediment short hold analysis	
3.																			Analyte for TO 15, short list (see attached Table 1)	
4.																			063	
5.																			C-71	
6.																				
7.																				
8.																				
9.																				
10.																				
11.																				
12.																				

Common Parameter/Container - Preservation Key

*1 - Volatile Organics = BTEX, GRO, TPH, Full List

*2 - Semivolatile Organics = PAHs, PCP, Dioxins, Full List, Herbicide/Pesticide/PCBs

*3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate

*4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By:	Laura Lark	On Ice?	Y N	Date	7/28/08	Time	6:50	Received By:	R.P. Pace	Date	7/29	Time	9:23
Relinquished By:		On Ice?	Y N	Date		Time		Received by:	Tenp= 28.	Date		Time	
Samples Shipped VIA: <input type="checkbox"/> Air Freight <input type="checkbox"/> Federal Express <input type="checkbox"/> Sampler <input type="checkbox"/> Other								Air Bill Number:					

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

1077802

Project Manager: Mary FinchProject Contact: Andrea NovakSampled by: Laura LarkLaboratory: Pace

Remarks:

Analyte for TO 15, short list (see attached Table 1)

Sample foams, high sediment short hold analysis
analyte for TO 15, short list (see attached Table 1)

063

Sample Condition Upon Receipt

Pace Analytical

Client Name: Barr

Project #

107802

Courier: FedEx UPS USPS Client Commercial Pace Other
 Tracking #: 865646552395

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: yes noSeals Intact: yes noPacking Material: Bubble Wrap Bubble Bags None OtherTemp Blank: Yes No

Thermometer Used 80344042 179425

Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 21.8

Biological Tissue Is Frozen: Yes No

Date and Initials of person examining contents: 72908

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/> No	<input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/> No	<input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/> No	<input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	wt			
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	
Per method, VOA preservation is checked after analysis		<input type="checkbox"/> Initial when completed	<input type="checkbox"/> Lot # of added preservative	
Samples checked for dechlorination:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/> No	<input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/>	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	051908-3			

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted:

Date/Time:

Comments/ Resolution:

(① Cancel PB per Andrea
 Nord. ② Sample is short hold → pH
 probably above 2. seen 8/1/08

Project Manager Review:

SCM

Date: 7/29/08

August 05, 2008

Client Services
Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601

RE: Project: 23/73-0162007102
Pace Project No.: 1077964

Dear Client Services:

Enclosed are the analytical results for sample(s) received by the laboratory on July 31, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Shanna Miller

shanna.miller@pacelabs.com
Project Manager

Florida (Nelap) Certification #: E87605

Illinois Certification #: 200011

Iowa Certification #: 368

Minnesota Certification #: 027-053-137

Wisconsin Certification #: 999407970

Enclosures

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 23/73-0162007102

Pace Project No.: 1077964

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1077964001	PB-2,43'	Water	07/30/08 15:05	07/31/08 09:31
1077964002	TRIP BLANK	Water	07/30/08 00:00	07/31/08 09:31

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 23/73-0162007102

Pace Project No.: 1077964

Lab ID	Sample ID	Method	Analysts	Analytes Reported
1077964001	PB-2,43'	EPA 8260	JMW	17
1077964002	TRIP BLANK	EPA 8260	JMW	17

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007102

Pace Project No.: 1077964

Method: **EPA 8260**

Description: 8260 MSV

Client: PASI Pittsburgh

Date: August 05, 2008

General Information:

2 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

pH: Post-analysis pH measurement indicates insufficient VOA sample preservation.

- PB-2,43' (Lab ID: 1077964001)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: MSV/10571

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCSD (Lab ID: 508250)
- Vinyl chloride

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- LCS (Lab ID: 508249)
- 1,4-Dioxane (p-Dioxane)

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/10571

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 1077813015

M0: Matrix spike recovery was outside laboratory control limits.

- MS (Lab ID: 508251)
- 1,4-Dioxane (p-Dioxane)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007102

Pace Project No.: 1077964

Method: EPA 8260

Description: 8260 MSV

Client: PASI Pittsburgh

Date: August 05, 2008

QC Batch: MSV/10571

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 1077813015

M0: Matrix spike recovery was outside laboratory control limits.

- MSD (Lab ID: 508252)
- 1,4-Dioxane (p-Dioxane)

P6: Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

- MS (Lab ID: 508251)
- cis-1,2-Dichloroethene
- MSD (Lab ID: 508252)
- cis-1,2-Dichloroethene

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: MSV/10571

1M: Sample was analyzed at a dilution due to a large amount of sediment in the vials.

- PB-2,43' (Lab ID: 1077964001)
- 1,2-Dichloroethane-d4 (S)

2M: Sample evaluated to 1/2 the reporting limit.

- PB-2,43' (Lab ID: 1077964001)
- 1,2-Dichloroethane-d4 (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007102

Pace Project No.: 1077964

Sample: PB-2,43'	Lab ID: 1077964001	Collected: 07/30/08 15:05	Received: 07/31/08 09:31	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	2.0	2		08/02/08 00:21	71-43-2	
Chloroform	ND	ug/L	2.0	2		08/02/08 00:21	67-66-3	
Chloromethane	3.1	ug/L	2.0	2		08/02/08 00:21	74-87-3	
1,1-Dichloroethane	ND	ug/L	2.0	2		08/02/08 00:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	2.0	2		08/02/08 00:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	2.0	2		08/02/08 00:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	2.0	2		08/02/08 00:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	2.0	2		08/02/08 00:21	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	160	2		08/02/08 00:21	123-91-1	
Tetrachloroethene	ND	ug/L	2.0	2		08/02/08 00:21	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	2.0	2		08/02/08 00:21	71-55-6	
Trichloroethene	ND	ug/L	2.0	2		08/02/08 00:21	79-01-6	
Vinyl chloride	ND	ug/L	0.80	2		08/02/08 00:21	75-01-4	
1,2-Dichloroethane-d4 (S)	91 %		75-125	2		08/02/08 00:21	17060-07-0	1M,2M, pH
Dibromofluoromethane (S)	89 %		75-125	2		08/02/08 00:21	1868-53-7	
4-Bromofluorobenzene (S)	97 %		75-125	2		08/02/08 00:21	460-00-4	
Toluene-d8 (S)	90 %		75-125	2		08/02/08 00:21	2037-26-5	

Date: 08/05/2008 10:35 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007102

Pace Project No.: 1077964

Sample: TRIP BLANK	Lab ID: 1077964002	Collected: 07/30/08 00:00	Received: 07/31/08 09:31	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/01/08 18:47	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/01/08 18:47	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/01/08 18:47	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/01/08 18:47	75-34-3	
1,2-Dichloroethane	1.0	ug/L	1.0	1		08/01/08 18:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/01/08 18:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/01/08 18:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/01/08 18:47	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/01/08 18:47	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/01/08 18:47	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/01/08 18:47	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/01/08 18:47	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/01/08 18:47	75-01-4	
1,2-Dichloroethane-d4 (S)	96 %		75-125	1		08/01/08 18:47	17060-07-0	
Dibromofluoromethane (S)	98 %		75-125	1		08/01/08 18:47	1868-53-7	
4-Bromofluorobenzene (S)	108 %		75-125	1		08/01/08 18:47	460-00-4	
Toluene-d8 (S)	100 %		75-125	1		08/01/08 18:47	2037-26-5	

Date: 08/05/2008 10:35 AM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 23/73-0162007102

Pace Project No.: 1077964

QC Batch:	MSV/10571	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	1077964001, 1077964002		

METHOD BLANK: 508248

Associated Lab Samples: 1077964001, 1077964002

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	
1,1-Dichloroethane	ug/L	ND	1.0	
1,1-Dichloroethene	ug/L	ND	1.0	
1,2-Dichloroethane	ug/L	ND	1.0	
1,4-Dioxane (p-Dioxane)	ug/L	ND	80.0	
Benzene	ug/L	ND	1.0	
Chloroform	ug/L	ND	1.0	
Chloromethane	ug/L	ND	1.0	
cis-1,2-Dichloroethene	ug/L	ND	1.0	
Tetrachloroethene	ug/L	ND	1.0	
trans-1,2-Dichloroethene	ug/L	ND	1.0	
Trichloroethene	ug/L	ND	1.0	
Vinyl chloride	ug/L	ND	0.40	
1,2-Dichloroethane-d4 (S)	%	88	75-125	
4-Bromofluorobenzene (S)	%	102	75-125	
Dibromofluoromethane (S)	%	95	75-125	
Toluene-d8 (S)	%	95	75-125	

LABORATORY CONTROL SAMPLE & LCSD: 508249 508250

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.1	15.8	90	79	75-132	13	20	
1,1-Dichloroethane	ug/L	20	17.8	16.7	89	84	75-125	6	20	
1,1-Dichloroethene	ug/L	20	18.2	15.7	91	79	75-127	15	20	
1,2-Dichloroethane	ug/L	20	18.5	17.8	92	89	75-125	4	20	
1,4-Dioxane (p-Dioxane)	ug/L	400	515	481	129	120	70-126	7	20	L3
Benzene	ug/L	20	19.4	17.9	97	90	75-125	8	20	
Chloroform	ug/L	20	18.5	17.3	92	87	75-125	6	20	
Chloromethane	ug/L	20	17.1	14.7	85	74	67-135	15	20	
cis-1,2-Dichloroethene	ug/L	20	19.3	18.1	96	90	75-125	7	20	
Tetrachloroethene	ug/L	20	18.2	15.6	91	78	75-125	15	20	
trans-1,2-Dichloroethene	ug/L	20	18.6	16.5	93	82	75-125	12	20	
Trichloroethene	ug/L	20	19.0	16.2	95	81	75-125	16	20	
Vinyl chloride	ug/L	20	16.4	13.7	82	69	71-133	18	20	L2
1,2-Dichloroethane-d4 (S)	%				94	91	75-125			
4-Bromofluorobenzene (S)	%				109	105	75-125			
Dibromofluoromethane (S)	%				107	99	75-125			
Toluene-d8 (S)	%				105	96	75-125			

Date: 08/05/2008 10:35 AM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 23/73-0162007102

Pace Project No.: 1077964

Parameter	Units	1077813015		MSD		508252					
		Result	Spike Conc.	MS Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD
											Qual
1,1,1-Trichloroethane	ug/L	ND	100	100	101	98.1	101	98	75-140	3	30
1,1-Dichloroethane	ug/L	ND	100	100	98.3	95.8	98	96	70-140	3	30
1,1-Dichloroethene	ug/L	ND	100	100	107	99.3	107	99	75-141	7	30
1,2-Dichloroethane	ug/L	ND	100	100	95.9	92.7	96	93	75-130	3	30
1,4-Dioxane (p-Dioxane)	ug/L	ND	2000	2000	2840	2860	142	143	63-128	.7	30 M0
Benzene	ug/L	ND	100	100	106	103	106	103	75-126	3	30
Chloroform	ug/L	ND	100	100	98.9	96.6	99	97	75-134	2	30
Chloromethane	ug/L	ND	100	100	96.7	94.0	97	94	61-148	3	30
cis-1,2-Dichloroethene	ug/L	570	100	100	622	605	52	35	65-148	3	30 P6
Tetrachloroethene	ug/L	ND	100	100	104	95.8	101	93	75-133	8	30
trans-1,2-Dichloroethene	ug/L	13.4	100	100	115	112	102	98	75-138	3	30
Trichloroethene	ug/L	180	100	100	257	255	77	75	75-130	1	30
Vinyl chloride	ug/L	31.0	100	100	116	115	85	84	64-150	1	30
1,2-Dichloroethane-d4 (S)	%						97	94	75-125		
4-Bromofluorobenzene (S)	%						113	103	75-125		
Dibromofluoromethane (S)	%						105	101	75-125		
Toluene-d8 (S)	%						101	98	75-125		

Date: 08/05/2008 10:35 AM

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QUALIFIERS

Project: 23/73-0162007102

Pace Project No.: 1077964

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

- 1M Sample was analyzed at a dilution due to a large amount of sediment in the vials.
- 2M Sample evaluated to 1/2 the reporting limit.
- L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
- M0 Matrix spike recovery was outside laboratory control limits.
- P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
- pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

BARR**Chain of Custody**

4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

Project Number

23173,-016,20,071,02

Project Name

No 26354

Sample Identification	Collection		Matrix	Type
	Date	Time		
1. PB-2,43'	7/30/08	15:05	X	X
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

Number of Containers/Preservative	Water		Soil		Total No. Of Containers	Remarks:
	Water	Soil	Water	Soil		
Volatile Organics (Pres.) *1						
Semivolatile Organics *2						
Dissolved Metals (HNO ₃)						
Total Metals (HNO ₃)						
General (Unpreserved) *3						
Cyanide (NaOH)						
Nutrients (H ₂ SO ₄) *4						
Oil and Grease (H ₂ SO ₄)						
Sulfide (Zn Acetate)						
Methane						
Bacteria (Na ₂ S ₂ O ₃)						
DRO (HCl)						
— 150 ml (unpres.)						
VOCS (2-oz tared MeOH) *1						
GRO, BTEX (2-oz tared MeOH)*1						
DRO (2-oz tared) - 25 grams						
Metals (2-oz unpreserved)						
SVOCS (2 or 4-oz unpres.) *2						
% Moisture (plastic vial, unpres.)						

Common Parameter/Container - Preservation Key

*1 - Volatile Organics = BTEX, GRO, TPH, Full List

*2 - Semivolatile Organics = PAHs, PCP, Dioxins, Full List, Herbicide/Pesticide/PCBs

*3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate

*4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By:

Laurie Larken

On Ice?

Y

N

Date

7/30/08

Time

18:00

Received by:

Mike Kipp

Date

7/31

Time

Temp

2.5°C

Relinquished By:

On Ice?

Y

N

Date

Time

Received by:

Date

Time

Samples Shipped VIA: Air Freight Federal Express Sampler
 Other

Air Bill Number:

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

1077964

COC 1 of 1

Project Manager: Mary Finch

Project Contact: Andra Nord

Sampled by: Lauren Larken

Laboratory: Pace

Remarks:

Analyze for TO15 short list,
see attached Task 1 for parameters
short hole analysis,
high sediment, sample foams
HOLD 250ml container

Sample Condition Upon Receipt

PaceAnalytical

Client Name: BarrProject # 1077964Courier: FedEx UPS USPS Client Commercial Pace OtherTracking #: 8666-4666-2432Custody Seal on Cooler/Box Present: yes no Seals intact: yes noPacking Material: Bubble Wrap Bubble Bags None Other Temp Blank: Yes NoThermometer Used 80344042, 179425

Type of Ice: Wet Blue None

 Samples on ice, cooling process has begunCooler Temperature 7.5Biological Tissue is Frozen: Yes No

Comments:

Date and Initials of person examining contents: 7/31/08

Temp should be above freezing to 6°C

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/D/Analysis Matrix: <u>WT</u>		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Per method, VOA preservation is checked after analysis		Initial when completed Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16. <u>one trip blank received.</u>
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>051908-3</u>		

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted:

Date/Time:

Comments/ Resolution: Sample is short hold → pH probably not above 2.
scm 7/31/08

Project Manager Review:

SCMDate: 7/31/08

August 12, 2008

Client Services
Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601

RE: Project: 23/73-0162007102 ME
Pace Project No.: 1078146

Dear Client Services:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Sylvia Hunter for
Shanna Miller
shanna.miller@pacelabs.com
Project Manager

Florida (Nelap) Certification #: E87605
Illinois Certification #: 200011
Iowa Certification #: 368
Minnesota Certification #: 027-053-137
Wisconsin Certification #: 999407970

Enclosures

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1078146001	PB-1, 44'-47'	Water	08/01/08 12:30	08/02/08 08:25
1078146002	PB-1, 49'-52'	Water	08/01/08 12:45	08/02/08 08:25
1078146003	PB-1, 54'-57'	Water	08/01/08 13:20	08/02/08 08:25
1078146004	PB-1, 59'-62'	Water	08/01/08 14:20	08/02/08 08:25
1078146005	PB-1, 64'-67'	Water	08/01/08 15:05	08/02/08 08:25
1078146006	PB-1, 69'-70'	Water	08/01/08 16:40	08/02/08 08:25
1078146007	PB-1, 72'-73'	Water	08/01/08 16:10	08/02/08 08:25
1078146008	DUPA	Water	08/01/08 00:00	08/02/08 08:25
1078146009	FB-2	Water	08/01/08 17:15	08/02/08 08:25
1078146010	TRIP BLANK	Water	08/01/08 00:00	08/02/08 08:25

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SAMPLE ANALYTE COUNT

Project: 23/73-0162007102 ME
 Pace Project No.: 1078146

Lab ID	Sample ID	Method	Analysts	Analytes Reported
1078146001	PB-1, 44'-47'	EPA 8260	CNC	17
1078146002	PB-1, 49'-52'	EPA 8260	JMW	17
1078146003	PB-1, 54'-57'	EPA 8260	JMW	17
1078146004	PB-1, 59'-62'	EPA 8260	JMW	17
1078146005	PB-1, 64'-67'	EPA 8260	JMW	17
1078146006	PB-1, 69'-70'	EPA 8260	JMW	17
1078146010	TRIP BLANK	EPA 8260	JMW	17

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

Method: **EPA 8260**

Description: 8260 MSV

Client: PASI Pittsburgh

Date: August 12, 2008

General Information:

7 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

pH: Post-analysis pH measurement indicates insufficient VOA sample preservation.

- PB-1, 44'-47' (Lab ID: 1078146001)
- PB-1, 54'-57' (Lab ID: 1078146003)
- PB-1, 59'-62' (Lab ID: 1078146004)
- PB-1, 64'-67' (Lab ID: 1078146005)
- PB-1, 69'-70' (Lab ID: 1078146006)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H1: Analysis conducted outside the EPA method holding time.

- PB-1, 44'-47' (Lab ID: 1078146001)

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: MSV/10592

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- LCS (Lab ID: 509324)
 - 1,4-Dioxane (p-Dioxane)
- LCSD (Lab ID: 509325)
 - 1,4-Dioxane (p-Dioxane)

QC Batch: MSV/10600

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- LCSD (Lab ID: 510293)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

Method: EPA 8260

Description: 8260 MSV

Client: PASI Pittsburgh

Date: August 12, 2008

QC Batch: MSV/10600

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- 1,4-Dioxane (p-Dioxane)

R1: RPD value was outside control limits.

- LCSD (Lab ID: 510293)
- 1,4-Dioxane (p-Dioxane)

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/10592

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 1077813037

M0: Matrix spike recovery was outside laboratory control limits.

- MS (Lab ID: 509587)
- 1,4-Dioxane (p-Dioxane)

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: MSV/10592

1M: Sample was analyzed at a dilution due to a large amount of sediment in the vials.

- PB-1, 59'-62' (Lab ID: 1078146004)
- 1,2-Dichloroethane-d4 (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

Sample: PB-1, 44'-47'	Lab ID: 1078146001	Collected: 08/01/08 12:30	Received: 08/02/08 08:25	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/11/08 13:49	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/11/08 13:49	67-66-3	
Chloromethane	1.4	ug/L	1.0	1		08/11/08 13:49	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/11/08 13:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/11/08 13:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/11/08 13:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 13:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 13:49	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/11/08 13:49	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/11/08 13:49	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/11/08 13:49	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/11/08 13:49	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/11/08 13:49	75-01-4	
1,2-Dichloroethane-d4 (S)	84 %		75-125	1		08/11/08 13:49	17060-07-0	H1,pH
Dibromofluoromethane (S)	92 %		75-125	1		08/11/08 13:49	1868-53-7	
4-Bromofluorobenzene (S)	98 %		75-125	1		08/11/08 13:49	460-00-4	
Toluene-d8 (S)	85 %		75-125	1		08/11/08 13:49	2037-26-5	

Date: 08/12/2008 10:50 AM

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

Sample: PB-1, 49'-52'	Lab ID: 1078146002	Collected: 08/01/08 12:45	Received: 08/02/08 08:25	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/05/08 22:21	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/05/08 22:21	67-66-3	
Chloromethane	2.1	ug/L	1.0	1		08/05/08 22:21	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/05/08 22:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/05/08 22:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/05/08 22:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/05/08 22:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/05/08 22:21	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/05/08 22:21	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/05/08 22:21	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/05/08 22:21	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/05/08 22:21	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/05/08 22:21	75-01-4	
1,2-Dichloroethane-d4 (S)	85 %		75-125	1		08/05/08 22:21	17060-07-0	
Dibromofluoromethane (S)	98 %		75-125	1		08/05/08 22:21	1868-53-7	
4-Bromofluorobenzene (S)	97 %		75-125	1		08/05/08 22:21	460-00-4	
Toluene-d8 (S)	89 %		75-125	1		08/05/08 22:21	2037-26-5	

Date: 08/12/2008 10:50 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

Sample: PB-1, 54'-57'	Lab ID: 1078146003	Collected: 08/01/08 13:20	Received: 08/02/08 08:25	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/05/08 22:43	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/05/08 22:43	67-66-3	
Chloromethane	4.1	ug/L	1.0	1		08/05/08 22:43	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/05/08 22:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/05/08 22:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/05/08 22:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/05/08 22:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/05/08 22:43	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/05/08 22:43	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/05/08 22:43	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/05/08 22:43	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/05/08 22:43	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/05/08 22:43	75-01-4	
1,2-Dichloroethane-d4 (S)	79 %		75-125	1		08/05/08 22:43	17060-07-0	pH
Dibromofluoromethane (S)	92 %		75-125	1		08/05/08 22:43	1868-53-7	
4-Bromofluorobenzene (S)	98 %		75-125	1		08/05/08 22:43	460-00-4	
Toluene-d8 (S)	87 %		75-125	1		08/05/08 22:43	2037-26-5	

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

Sample: PB-1, 59'-62'	Lab ID: 1078146004	Collected: 08/01/08 14:20	Received: 08/02/08 08:25	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	2.0	2		08/05/08 23:50	71-43-2	
Chloroform	ND	ug/L	2.0	2		08/05/08 23:50	67-66-3	
Chloromethane	5.3	ug/L	2.0	2		08/05/08 23:50	74-87-3	
1,1-Dichloroethane	ND	ug/L	2.0	2		08/05/08 23:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	2.0	2		08/05/08 23:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	2.0	2		08/05/08 23:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	2.0	2		08/05/08 23:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	2.0	2		08/05/08 23:50	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	160	2		08/05/08 23:50	123-91-1	
Tetrachloroethene	ND	ug/L	2.0	2		08/05/08 23:50	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	2.0	2		08/05/08 23:50	71-55-6	
Trichloroethene	ND	ug/L	2.0	2		08/05/08 23:50	79-01-6	
Vinyl chloride	ND	ug/L	0.80	2		08/05/08 23:50	75-01-4	
1,2-Dichloroethane-d4 (S)	83 %		75-125	2		08/05/08 23:50	17060-07-0	1M,pH
Dibromofluoromethane (S)	98 %		75-125	2		08/05/08 23:50	1868-53-7	
4-Bromofluorobenzene (S)	94 %		75-125	2		08/05/08 23:50	460-00-4	
Toluene-d8 (S)	92 %		75-125	2		08/05/08 23:50	2037-26-5	

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

Sample: PB-1, 64'-67'	Lab ID: 1078146005	Collected: 08/01/08 15:05	Received: 08/02/08 08:25	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/05/08 23:06	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/05/08 23:06	67-66-3	
Chloromethane	5.0	ug/L	1.0	1		08/05/08 23:06	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/05/08 23:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/05/08 23:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/05/08 23:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/05/08 23:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/05/08 23:06	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/05/08 23:06	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/05/08 23:06	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/05/08 23:06	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/05/08 23:06	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/05/08 23:06	75-01-4	
1,2-Dichloroethane-d4 (S)	85 %		75-125	1		08/05/08 23:06	17060-07-0	pH
Dibromofluoromethane (S)	93 %		75-125	1		08/05/08 23:06	1868-53-7	
4-Bromofluorobenzene (S)	96 %		75-125	1		08/05/08 23:06	460-00-4	
Toluene-d8 (S)	90 %		75-125	1		08/05/08 23:06	2037-26-5	

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

Sample: PB-1, 69'-70'	Lab ID: 1078146006	Collected: 08/01/08 16:40	Received: 08/02/08 08:25	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/05/08 23:28	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/05/08 23:28	67-66-3	
Chloromethane	1.2	ug/L	1.0	1		08/05/08 23:28	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/05/08 23:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/05/08 23:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/05/08 23:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/05/08 23:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/05/08 23:28	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/05/08 23:28	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/05/08 23:28	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/05/08 23:28	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/05/08 23:28	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/05/08 23:28	75-01-4	
1,2-Dichloroethane-d4 (S)	83 %		75-125	1		08/05/08 23:28	17060-07-0	pH
Dibromofluoromethane (S)	97 %		75-125	1		08/05/08 23:28	1868-53-7	
4-Bromofluorobenzene (S)	98 %		75-125	1		08/05/08 23:28	460-00-4	
Toluene-d8 (S)	90 %		75-125	1		08/05/08 23:28	2037-26-5	

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

Sample: TRIP BLANK	Lab ID: 1078146010	Collected: 08/01/08 00:00	Received: 08/02/08 08:25	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/05/08 17:53	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/05/08 17:53	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/05/08 17:53	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/05/08 17:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/05/08 17:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/05/08 17:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/05/08 17:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/05/08 17:53	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/05/08 17:53	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/05/08 17:53	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/05/08 17:53	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/05/08 17:53	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/05/08 17:53	75-01-4	
1,2-Dichloroethane-d4 (S)	81 %		75-125	1		08/05/08 17:53	17060-07-0	
Dibromofluoromethane (S)	90 %		75-125	1		08/05/08 17:53	1868-53-7	
4-Bromofluorobenzene (S)	93 %		75-125	1		08/05/08 17:53	460-00-4	
Toluene-d8 (S)	88 %		75-125	1		08/05/08 17:53	2037-26-5	

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QUALITY CONTROL DATA

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

QC Batch:	MSV/10592	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	1078146002, 1078146003, 1078146004, 1078146005, 1078146006, 1078146010		

METHOD BLANK: 509323

Associated Lab Samples: 1078146002, 1078146003, 1078146004, 1078146005, 1078146006, 1078146010

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	
1,1-Dichloroethane	ug/L	ND	1.0	
1,1-Dichloroethene	ug/L	ND	1.0	
1,2-Dichloroethane	ug/L	ND	1.0	
1,4-Dioxane (p-Dioxane)	ug/L	ND	80.0	
Benzene	ug/L	ND	1.0	
Chloroform	ug/L	ND	1.0	
Chloromethane	ug/L	ND	1.0	
cis-1,2-Dichloroethene	ug/L	ND	1.0	
Tetrachloroethene	ug/L	ND	1.0	
trans-1,2-Dichloroethene	ug/L	ND	1.0	
Trichloroethene	ug/L	ND	1.0	
Vinyl chloride	ug/L	ND	0.40	
1,2-Dichloroethane-d4 (S)	%	83	75-125	
4-Bromofluorobenzene (S)	%	98	75-125	
Dibromofluoromethane (S)	%	92	75-125	
Toluene-d8 (S)	%	87	75-125	

LABORATORY CONTROL SAMPLE & LCSD: 509324 509325

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	20	17.1	16.9	85	85	75-132	.9	20	
1,1-Dichloroethane	ug/L	20	16.2	16.1	81	81	75-125	.8	20	
1,1-Dichloroethene	ug/L	20	18.8	17.4	94	87	75-127	8	20	
1,2-Dichloroethane	ug/L	20	16.5	15.7	82	78	75-125	5	20	
1,4-Dioxane (p-Dioxane)	ug/L	400	527	525	132	131	70-126	.4	20	L3
Benzene	ug/L	20	19.0	18.3	95	91	75-125	4	20	
Chloroform	ug/L	20	17.4	16.7	87	83	75-125	4	20	
Chloromethane	ug/L	20	14.5	13.5	72	67	67-135	7	20	
cis-1,2-Dichloroethene	ug/L	20	18.6	18.3	93	92	75-125	2	20	
Tetrachloroethene	ug/L	20	18.5	18.2	93	91	75-125	1	20	
trans-1,2-Dichloroethene	ug/L	20	18.8	18.3	94	92	75-125	2	20	
Trichloroethene	ug/L	20	17.6	17.9	88	89	75-125	2	20	
Vinyl chloride	ug/L	20	15.1	14.4	75	72	71-133	4	20	
1,2-Dichloroethane-d4 (S)	%				84	80	75-125			
4-Bromofluorobenzene (S)	%				96	94	75-125			
Dibromofluoromethane (S)	%				97	92	75-125			
Toluene-d8 (S)	%				88	90	75-125			

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QUALITY CONTROL DATA

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

Parameter	Units	1077813037		MS		MSD		MS		MSD		% Rec		Max			
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	MSD % Rec	% Rec Limits	RPD RPD	RPD RPD	Qual					
1,1,1-Trichloroethane	ug/L	ND	100	100	89.0	85.8	89	86	75-140	4	30						
1,1-Dichloroethane	ug/L	ND	100	100	82.9	78.8	83	79	70-140	5	30						
1,1-Dichloroethene	ug/L	ND	100	100	101	90.4	101	90	75-141	11	30						
1,2-Dichloroethane	ug/L	ND	100	100	77.4	74.8	77	75	75-130	3	30						
1,4-Dioxane (p-Dioxane)	ug/L	ND	2000	2000	2750	2570	138	128	63-128	7	30 M0						
Benzene	ug/L	ND	100	100	94.5	90.6	94	91	75-126	4	30						
Chloroform	ug/L	ND	100	100	86.2	81.6	86	82	75-134	6	30						
Chloromethane	ug/L	ND	100	100	78.7	83.0	79	83	61-148	5	30						
cis-1,2-Dichloroethene	ug/L	486	100	100	571	564	85	77	65-148	1	30						
Tetrachloroethene	ug/L	ND	100	100	98.3	90.9	98	91	75-133	8	30						
trans-1,2-Dichloroethene	ug/L	11.5	100	100	104	100	92	88	75-138	4	30						
Trichloroethene	ug/L	156	100	100	241	236	84	80	75-130	2	30						
Vinyl chloride	ug/L	21.6	100	100	110	102	89	81	64-150	8	30						
1,2-Dichloroethane-d4 (S)	%						81	83	75-125								
4-Bromofluorobenzene (S)	%						103	94	75-125								
Dibromofluoromethane (S)	%						95	94	75-125								
Toluene-d8 (S)	%						96	91	75-125								

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QUALITY CONTROL DATA

Project: 23/73-0162007102 ME

Pace Project No.: 1078146

QC Batch:	MSV/10600	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	1078146001		

METHOD BLANK: 510291

Associated Lab Samples: 1078146001

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	
1,1-Dichloroethane	ug/L	ND	1.0	
1,1-Dichloroethene	ug/L	ND	1.0	
1,2-Dichloroethane	ug/L	ND	1.0	
1,4-Dioxane (p-Dioxane)	ug/L	ND	80.0	
Benzene	ug/L	ND	1.0	
Chloroform	ug/L	ND	1.0	
Chloromethane	ug/L	ND	1.0	
cis-1,2-Dichloroethene	ug/L	ND	1.0	
Tetrachloroethene	ug/L	ND	1.0	
trans-1,2-Dichloroethene	ug/L	ND	1.0	
Trichloroethene	ug/L	ND	1.0	
Vinyl chloride	ug/L	ND	0.40	
1,2-Dichloroethane-d4 (S)	%	87	75-125	
4-Bromofluorobenzene (S)	%	91	75-125	
Dibromofluoromethane (S)	%	93	75-125	
Toluene-d8 (S)	%	86	75-125	

LABORATORY CONTROL SAMPLE & LCSD: 510292 510293

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.6	17.9	93	90	75-132	4	20	
1,1-Dichloroethane	ug/L	20	17.0	16.2	85	81	75-125	5	20	
1,1-Dichloroethene	ug/L	20	18.4	17.8	92	89	75-127	3	20	
1,2-Dichloroethane	ug/L	20	17.1	17.4	86	87	75-125	1	20	
1,4-Dioxane (p-Dioxane)	ug/L	400	399	536	100	134	70-126	29	20	L3,R1
Benzene	ug/L	20	19.6	19.3	98	96	75-125	2	20	
Chloroform	ug/L	20	18.2	17.3	91	87	75-125	5	20	
Chloromethane	ug/L	20	15.4	14.2	77	71	67-135	8	20	
cis-1,2-Dichloroethene	ug/L	20	20.0	19.5	100	97	75-125	3	20	
Tetrachloroethene	ug/L	20	18.2	17.9	91	89	75-125	2	20	
trans-1,2-Dichloroethene	ug/L	20	19.4	17.9	97	89	75-125	8	20	
Trichloroethene	ug/L	20	18.5	18.0	92	90	75-125	2	20	
Vinyl chloride	ug/L	20	16.4	14.8	82	74	71-133	10	20	
1,2-Dichloroethane-d4 (S)	%				82	80	75-125			
4-Bromofluorobenzene (S)	%				96	96	75-125			
Dibromofluoromethane (S)	%				97	96	75-125			
Toluene-d8 (S)	%				86	87	75-125			

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QUALIFIERS

Project: 23/73-0162007102 ME
Pace Project No.: 1078146

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

WORKORDER QUALIFIERS

WO: 1078146

- [1] Samples were received outside of the recommended temperature range of 0-6 degrees Celsius. The samples were received from the field on ice, indicating the cool down process had begun.

ANALYTE QUALIFIERS

- 1M Sample was analyzed at a dilution due to a large amount of sediment in the vials.
H1 Analysis conducted outside the EPA method holding time.
L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
M0 Matrix spike recovery was outside laboratory control limits.
R1 RPD value was outside control limits.
pH Post-analysis pH measurement indicates insufficient VOA sample preservation.



1078146

Chain of Custody**BARR**

4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

Project Number

23/73-0162007102

Project Name

ME

No 26359

Sample Identification	Collection		Number of Containers/Preservative					COC 1 of 1
			Water		Soil			
	Date	Time	Matrix	Type	Grab Comp.	QC		
1. PB-1, 44'-47'	8/1/08	12:30	X		X		3	Volatile Organics (Pres.) *1
2. PB-1, 49'-52'	8/1/08	12:45	X		X		3	Semivolatile Organics *2
3. PB-1, 54'-57'	8/1/08	13:20	X		X		3	Dissolved Metals (HNO ₃)
4. PB-1, 59'-62'	8/1/08	14:20	X		X		3	Total Metals (HNO ₃)
5. PB-1, 64'-67'	8/1/08	15:05	X		X		3	General (Unpreserved) *3
6. PB-1, 72'-73'		16:10	22		X		3	Cyanide (NaOH)
7. PB-1, 69'-70'	8/1/08	16:40	X		X		3	Nutrients (H ₂ SO ₄) *4
8. PB-1, 72'-73'	8/1/08	16:10	X		X		3	Oil and Grease (H ₂ SO ₄)
9. Dup A	8/1/08	—	X		X		3	Sulfide (Zn Acetate)
10. FB-2	8/1/08	17:15	X		X	3	Methane	
11.								Bacteria (Na ₂ S ₂ O ₃)
12.								DRO (HCl)
								250 mL (unpres.)
								VOCS (2-oz tared MeOH) *1
								GRO, BTEX (2-oz tared MeOH) *1
								DRO (2-oz tared) - 25 grams
								Metals (2-oz unpreserved)
								SVOCs (2 or 4-oz unpres.) *2
								% Moisture (plastic vial, unpres.)
								Total No. Of Containers
								3
								Analyze for TO15 shortlist (see attached Table 1) 001
								high sediment, short half analysis 002
								* sample foams 003
								* sample foams ** Hold 250mL 004
								* sample foams 005
								* sample foams 006
								HOLD this sample place * sample foams 007
								* sample foams 008
								lab provided D5 water through screen Analyze for TO15 shortlist (see attached Table 1) 009
								T=8.7°C

Common Parameter/Container - Preservation Key

*1 - Volatile Organics = BTEX, GRO, TPH, Full List

*2 - Semivolatile Organics = PAHs, PCP, Dioxins, Full List, Herbicide/Pesticide/PCBs

*3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate

*4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By:

Lavon Lakin

On Ice?

Y N

Date

8/2/08

Time

8:21

Received by:

Lavon Lakin

Date

8-2-08

Time

825

Relinquished By:

On Ice?

Y N

Date

Time

Received by:

Date

Time

Samples Shipped VIA: Air Freight Federal Express Sampler
 Other

Air Bill Number:

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

Sample Condition Upon Receipt

Pace Analytical

Client Name: BartProject # 1078146Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

(Optional)	
Proj. Due Date	Proj. Name

Custody Seal on Cooler/Box Present: yes no Seals intact: yes noPacking Material: Bubble Wrap Bubble Bags None Other _____ Temp Blank: Yes No _____Thermometer Used 80344042, 179428 Type of Ice: Wet Blue None Samples on ice, cooling process has begunCooler Temperature 8.7° Biological Tissue Is Frozen: Yes NoComments: _____ Date and initials of person examining contents: CL 8-2-08

Temp should be above freezing to 6°C	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
-Pace Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Includes date/time/ID/Analysis Matrix: <u>WT</u>		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Per method, VOA preservation is checked after analysis		Initial when completed Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15. Vial for PB-1, 54-57; All vials for
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16. PB-1, 59-62; All vials for PB-1, 72-73
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>051908-3</u>		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Andrea N Date/Time: 8/4/08 (email)Comments/ Resolution: ① Hold PB-1 72-73, Dup A andFB-2 per A.N. scru 8/4/08② Okay to analyze the samples out of temp.

Project Manager Review:

SCMDate: 8/4/08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

August 14, 2008

Client Services
Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601

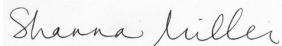
RE: Project: 23/73-0162007102 ME
Pace Project No.: 1078267

Dear Client Services:

Enclosed are the analytical results for sample(s) received by the laboratory on August 05, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Shanna Miller

shanna.miller@pacelabs.com
Project Manager

Florida (Nelap) Certification #: E87605
Illinois Certification #: 200011
Iowa Certification #: 368
Minnesota Certification #: 027-053-137
Wisconsin Certification #: 999407970

Enclosures

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1078267001	PB-3, 41'-44'	Water	08/04/08 10:45	08/05/08 17:03
1078267002	PB-3, 46'-49'	Water	08/04/08 11:00	08/05/08 17:03
1078267003	PB-3, 51'-54'	Water	08/04/08 12:25	08/05/08 17:03
1078267004	PB-3, 62'-63' bottom	Water	08/04/08 12:50	08/05/08 17:03
1078267007	Dup B	Water		08/05/08 17:03
1078267008	FB-3	Water	08/04/08 00:00	08/05/08 17:03
1078267012	Trip Blank	Water		08/05/08 17:03

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SAMPLE ANALYTE COUNT

Project: 23/73-0162007102 ME
 Pace Project No.: 1078267

Lab ID	Sample ID	Method	Analysts	Analytes Reported
1078267001	PB-3, 41'-44'	EPA 8260	CNC	17
1078267002	PB-3, 46'-49'	EPA 8260	CNC	17
1078267003	PB-3, 51'-54'	EPA 8260	CNC	17
1078267004	PB-3, 62'-63' bottom	EPA 8260	CNC	17
1078267007	Dup B	EPA 8260	CNC	17
1078267008	FB-3	EPA 8260	CNC	17
1078267012	Trip Blank	EPA 8260	CNC	17

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

Method: **EPA 8260**

Description: 8260 MSV

Client: PASI Pittsburgh

Date: August 14, 2008

General Information:

7 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

pH: Post-analysis pH measurement indicates insufficient VOA sample preservation.

- Dup B (Lab ID: 1078267007)
- PB-3, 41'-44' (Lab ID: 1078267001)
- PB-3, 46'-49' (Lab ID: 1078267002)
- PB-3, 51'-54' (Lab ID: 1078267003)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: MSV/10600

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- LCSD (Lab ID: 510293)
- 1,4-Dioxane (p-Dioxane)

R1: RPD value was outside control limits.

- LCSD (Lab ID: 510293)
- 1,4-Dioxane (p-Dioxane)

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

Method: EPA 8260

Description: 8260 MSV

Client: PASI Pittsburgh

Date: August 14, 2008

Additional Comments:

Analyte Comments:

QC Batch: MSV/10600

1M: The sample was analyzed at a dilution due to a large amount of sediment in the vials. The pH was found to be greater than 2; however, the sample ran within 7 days of collection and therefore per method the sample was still properly preserved.

- PB-3, 62'-63' bottom (Lab ID: 1078267004)
- 1,2-Dichloroethane-d4 (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

Sample: PB-3, 41'-44'	Lab ID: 1078267001	Collected: 08/04/08 10:45	Received: 08/05/08 17:03	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/11/08 16:25	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/11/08 16:25	67-66-3	
Chloromethane	1.1	ug/L	1.0	1		08/11/08 16:25	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/11/08 16:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/11/08 16:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/11/08 16:25	75-35-4	
cis-1,2-Dichloroethene	5.5	ug/L	1.0	1		08/11/08 16:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 16:25	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/11/08 16:25	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/11/08 16:25	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/11/08 16:25	71-55-6	
Trichloroethene	51.6	ug/L	1.0	1		08/11/08 16:25	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/11/08 16:25	75-01-4	
1,2-Dichloroethane-d4 (S)	88 %		75-125	1		08/11/08 16:25	17060-07-0	pH
Dibromofluoromethane (S)	103 %		75-125	1		08/11/08 16:25	1868-53-7	
4-Bromofluorobenzene (S)	91 %		75-125	1		08/11/08 16:25	460-00-4	
Toluene-d8 (S)	86 %		75-125	1		08/11/08 16:25	2037-26-5	

Date: 08/14/2008 12:04 PM

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

Sample: PB-3, 46'-49'	Lab ID: 1078267002	Collected: 08/04/08 11:00	Received: 08/05/08 17:03	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/11/08 16:47	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/11/08 16:47	67-66-3	
Chloromethane	2.2	ug/L	1.0	1		08/11/08 16:47	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/11/08 16:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/11/08 16:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/11/08 16:47	75-35-4	
cis-1,2-Dichloroethene	5.8	ug/L	1.0	1		08/11/08 16:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 16:47	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/11/08 16:47	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/11/08 16:47	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/11/08 16:47	71-55-6	
Trichloroethene	48.6	ug/L	1.0	1		08/11/08 16:47	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/11/08 16:47	75-01-4	
1,2-Dichloroethane-d4 (S)	85 %		75-125	1		08/11/08 16:47	17060-07-0	pH
Dibromofluoromethane (S)	94 %		75-125	1		08/11/08 16:47	1868-53-7	
4-Bromofluorobenzene (S)	92 %		75-125	1		08/11/08 16:47	460-00-4	
Toluene-d8 (S)	88 %		75-125	1		08/11/08 16:47	2037-26-5	

Date: 08/14/2008 12:04 PM

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

Sample: PB-3, 51'-54'	Lab ID: 1078267003	Collected: 08/04/08 12:25	Received: 08/05/08 17:03	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/11/08 17:10	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/11/08 17:10	67-66-3	
Chloromethane	2.4	ug/L	1.0	1		08/11/08 17:10	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/11/08 17:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/11/08 17:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/11/08 17:10	75-35-4	
cis-1,2-Dichloroethene	3.3	ug/L	1.0	1		08/11/08 17:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 17:10	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/11/08 17:10	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/11/08 17:10	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/11/08 17:10	71-55-6	
Trichloroethene	24.2	ug/L	1.0	1		08/11/08 17:10	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/11/08 17:10	75-01-4	
1,2-Dichloroethane-d4 (S)	87 %		75-125	1		08/11/08 17:10	17060-07-0	pH
Dibromofluoromethane (S)	92 %		75-125	1		08/11/08 17:10	1868-53-7	
4-Bromofluorobenzene (S)	92 %		75-125	1		08/11/08 17:10	460-00-4	
Toluene-d8 (S)	90 %		75-125	1		08/11/08 17:10	2037-26-5	

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

Sample: PB-3, 62'-63' bottom	Lab ID: 1078267004	Collected: 08/04/08 12:50	Received: 08/05/08 17:03	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	2.0	2		08/11/08 20:08	71-43-2	
Chloroform	ND	ug/L	2.0	2		08/11/08 20:08	67-66-3	
Chloromethane	4.4	ug/L	2.0	2		08/11/08 20:08	74-87-3	
1,1-Dichloroethane	ND	ug/L	2.0	2		08/11/08 20:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	2.0	2		08/11/08 20:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	2.0	2		08/11/08 20:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	2.0	2		08/11/08 20:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	2.0	2		08/11/08 20:08	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	160	2		08/11/08 20:08	123-91-1	
Tetrachloroethene	ND	ug/L	2.0	2		08/11/08 20:08	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	2.0	2		08/11/08 20:08	71-55-6	
Trichloroethene	ND	ug/L	2.0	2		08/11/08 20:08	79-01-6	
Vinyl chloride	ND	ug/L	0.80	2		08/11/08 20:08	75-01-4	
1,2-Dichloroethane-d4 (S)	88 %		75-125	2		08/11/08 20:08	17060-07-0	1M
Dibromofluoromethane (S)	98 %		75-125	2		08/11/08 20:08	1868-53-7	
4-Bromofluorobenzene (S)	94 %		75-125	2		08/11/08 20:08	460-00-4	
Toluene-d8 (S)	86 %		75-125	2		08/11/08 20:08	2037-26-5	

Date: 08/14/2008 12:04 PM

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

Sample: Dup B	Lab ID: 1078267007	Collected:	Received: 08/05/08 17:03	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV								Analytical Method: EPA 8260
Benzene	ND	ug/L	1.0	1		08/11/08 18:17	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/11/08 18:17	67-66-3	
Chloromethane	4.9	ug/L	1.0	1		08/11/08 18:17	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/11/08 18:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/11/08 18:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/11/08 18:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 18:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 18:17	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/11/08 18:17	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/11/08 18:17	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/11/08 18:17	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/11/08 18:17	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/11/08 18:17	75-01-4	
1,2-Dichloroethane-d4 (S)	83 %		75-125	1		08/11/08 18:17	17060-07-0	pH
Dibromofluoromethane (S)	96 %		75-125	1		08/11/08 18:17	1868-53-7	
4-Bromofluorobenzene (S)	97 %		75-125	1		08/11/08 18:17	460-00-4	
Toluene-d8 (S)	88 %		75-125	1		08/11/08 18:17	2037-26-5	

Date: 08/14/2008 12:04 PM

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

Sample: FB-3	Lab ID: 1078267008	Collected: 08/04/08 00:00	Received: 08/05/08 17:03	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/11/08 16:03	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/11/08 16:03	67-66-3	
Chloromethane	1.9	ug/L	1.0	1		08/11/08 16:03	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/11/08 16:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/11/08 16:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/11/08 16:03	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 16:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 16:03	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/11/08 16:03	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/11/08 16:03	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/11/08 16:03	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/11/08 16:03	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/11/08 16:03	75-01-4	
1,2-Dichloroethane-d4 (S)	91 %		75-125	1		08/11/08 16:03	17060-07-0	
Dibromofluoromethane (S)	95 %		75-125	1		08/11/08 16:03	1868-53-7	
4-Bromofluorobenzene (S)	102 %		75-125	1		08/11/08 16:03	460-00-4	
Toluene-d8 (S)	87 %		75-125	1		08/11/08 16:03	2037-26-5	

Date: 08/14/2008 12:04 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

Sample: Trip Blank	Lab ID: 1078267012	Collected:	Received: 08/05/08 17:03	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260						
Benzene	ND	ug/L	1.0	1		08/11/08 15:40	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/11/08 15:40	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/11/08 15:40	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/11/08 15:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/11/08 15:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/11/08 15:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 15:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 15:40	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/11/08 15:40	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/11/08 15:40	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/11/08 15:40	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/11/08 15:40	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/11/08 15:40	75-01-4	
1,2-Dichloroethane-d4 (S)	87 %		75-125	1		08/11/08 15:40	17060-07-0	
Dibromofluoromethane (S)	100 %		75-125	1		08/11/08 15:40	1868-53-7	
4-Bromofluorobenzene (S)	99 %		75-125	1		08/11/08 15:40	460-00-4	
Toluene-d8 (S)	85 %		75-125	1		08/11/08 15:40	2037-26-5	

Date: 08/14/2008 12:04 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

QC Batch: MSV/10600 Analysis Method: EPA 8260

QC Batch Method: EPA 8260 Analysis Description: 8260 MSV

Associated Lab Samples: 1078267001, 1078267002, 1078267003, 1078267004, 1078267007, 1078267008, 1078267012

METHOD BLANK: 510291

Associated Lab Samples: 1078267001, 1078267002, 1078267003, 1078267004, 1078267007, 1078267008, 1078267012

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	
1,1-Dichloroethane	ug/L	ND	1.0	
1,1-Dichloroethene	ug/L	ND	1.0	
1,2-Dichloroethane	ug/L	ND	1.0	
1,4-Dioxane (p-Dioxane)	ug/L	ND	80.0	
Benzene	ug/L	ND	1.0	
Chloroform	ug/L	ND	1.0	
Chloromethane	ug/L	ND	1.0	
cis-1,2-Dichloroethene	ug/L	ND	1.0	
Tetrachloroethene	ug/L	ND	1.0	
trans-1,2-Dichloroethene	ug/L	ND	1.0	
Trichloroethene	ug/L	ND	1.0	
Vinyl chloride	ug/L	ND	0.40	
1,2-Dichloroethane-d4 (S)	%	87	75-125	
4-Bromofluorobenzene (S)	%	91	75-125	
Dibromofluoromethane (S)	%	93	75-125	
Toluene-d8 (S)	%	86	75-125	

LABORATORY CONTROL SAMPLE & LCSD: 510292 510293

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.6	17.9	93	90	75-132	4	20	
1,1-Dichloroethane	ug/L	20	17.0	16.2	85	81	75-125	5	20	
1,1-Dichloroethene	ug/L	20	18.4	17.8	92	89	75-127	3	20	
1,2-Dichloroethane	ug/L	20	17.1	17.4	86	87	75-125	1	20	
1,4-Dioxane (p-Dioxane)	ug/L	400	399	536	100	134	70-126	29	20	L3,R1
Benzene	ug/L	20	19.6	19.3	98	96	75-125	2	20	
Chloroform	ug/L	20	18.2	17.3	91	87	75-125	5	20	
Chloromethane	ug/L	20	15.4	14.2	77	71	67-135	8	20	
cis-1,2-Dichloroethene	ug/L	20	20.0	19.5	100	97	75-125	3	20	
Tetrachloroethene	ug/L	20	18.2	17.9	91	89	75-125	2	20	
trans-1,2-Dichloroethene	ug/L	20	19.4	17.9	97	89	75-125	8	20	
Trichloroethene	ug/L	20	18.5	18.0	92	90	75-125	2	20	
Vinyl chloride	ug/L	20	16.4	14.8	82	74	71-133	10	20	
1,2-Dichloroethane-d4 (S)	%				82	80	75-125			
4-Bromofluorobenzene (S)	%				96	96	75-125			
Dibromofluoromethane (S)	%				97	96	75-125			
Toluene-d8 (S)	%				86	87	75-125			

Date: 08/14/2008 12:04 PM

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QUALITY CONTROL DATA

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

Parameter	Units	1078100004		MS		MSD		MS Result	% Rec	MSD % Rec	% Rec	510295	
		Result	Conc.	Spike	Conc.	MS	MSD					RPD	RPD
1,1,1-Trichloroethane	ug/L	ND	20	20	18.9	20.1	95	101	75-140	6	30		
1,1-Dichloroethane	ug/L	ND	20	20	16.7	17.8	83	89	70-140	6	30		
1,1-Dichloroethene	ug/L	ND	20	20	18.4	20.0	92	100	75-141	8	30		
1,2-Dichloroethane	ug/L	ND	20	20	16.4	17.4	82	87	75-130	6	30		
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	400	463	512	116	128	63-128	10	30		
Benzene	ug/L	ND	20	20	19.6	20.7	94	100	75-126	6	30		
Chloroform	ug/L	ND	20	20	17.6	19.0	88	95	75-134	7	30		
Chloromethane	ug/L	ND	20	20	15.5	16.5	77	82	61-148	6	30		
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.6	20.6	98	103	65-148	5	30		
Tetrachloroethene	ug/L	ND	20	20	19.0	19.9	95	99	75-133	5	30		
trans-1,2-Dichloroethene	ug/L	ND	20	20	18.0	19.2	90	96	75-138	6	30		
Trichloroethene	ug/L	ND	20	20	19.0	20.0	95	100	75-130	5	30		
Vinyl chloride	ug/L	ND	20	20	16.9	17.1	84	85	64-150	1	30		
1,2-Dichloroethane-d4 (S)	%						80	84	75-125				
4-Bromofluorobenzene (S)	%						94	98	75-125				
Dibromofluoromethane (S)	%						92	94	75-125				
Toluene-d8 (S)	%						82	87	75-125				

Date: 08/14/2008 12:04 PM

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QUALIFIERS

Project: 23/73-0162007102 ME

Pace Project No.: 1078267

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

- 1M The sample was analyzed at a dilution due to a large amount of sediment in the vials. The pH was found to be greater than 2; however, the sample ran within 7 days of collection and therefore per method the sample was still properly preserved.
- L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
- R1 RPD value was outside control limits.
- pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

Chain of Custody

BARR

4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

Project Number

23173-0162007102

Project Name

ME

NO 26368

Sample Identification	Collection		Matrix	Type		Number of Containers/Preservative		COC 1 of 1											
				Water	Soil	Water	Soil												
	Date	Time		Grab	Comp.	Volatile Organics (Pres.) *1	Semivolatile Organics *2	Dissolved Metals (HNO ₃)	Total Metals (HNO ₃)	General (Unpreserved) *3	Cyanide (NaOH)	Nutrients (H ₂ SO ₄) *4	Oil and Grease (H ₂ SO ₄)	Sulfide (Zn Acetate)	Methane	Bacteria (Na ₂ S ₂ O ₃)	DRO (HCl)	TCLP (*not unpres.)	Total No. Of Containers
1. PB-3, 41'-44'	8/4/08	10:45	X		X	3												3	Run TO15 shortlist (see attached Table 1) 001
2. PB-3, 46'-49'	8/4/08	11:00	X		X	3												3	Short hold analysis, high 002 sediment contents, samples 003 foam
3. PB-3, 51'-54'	8/4/08	12:25	X		X	3												3	003
4. PB-3, 62'-63', bottom	8/4/08	12:50	X		X	3												3	004
5. PB-1a, 54'-57'	8/4/08	13:50	X		X	3												3	* Bill directly to Barr, not project, call Andrea w/questions 001
6. PB-1a, 64'-67'	8/4/08	17:15	X		X	3												3	* Bill directly to Barr, not project, call Andrea w/questions 002
7. Dup B	-	-	X		X	3	Save 8/7/08										3	007	
8. FB-3	8/4/08	-	X		X	3												3	Run TO15 shortlist (see attached Table 1) 008
9. cuttings 7/21/08	8/4/08	18:40	X		X												1	12	HOLD 009
10. decant/purge water 7/21/08	8/4/08	18:45	X		X	3												3	HOLD 010
11. decant/purge water 8/4/08	8/4/08	18:50	X		X	3												3	HOLD 011
12.																			

Common Parameter/Container - Preservation Key

*1 - Volatile Organics = BTEX, GRO, TPH, Full List

*2 - Semivolatile Organics = PAHs, PCP, Dioxins, Full List, Herbicide/Pesticide/PCBs

*3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate

*4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By: <i>Loren Lark</i>	On Ice? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Date 8/4/08	Time 1703	Received by: <i>J</i>	PACE	Date 8/5/08	Time 1703
Relinquished By:	On Ice? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N	Date	Time	Received by:		Date	Time
Samples Shipped VIA: <input type="checkbox"/> Air Freight <input type="checkbox"/> Federal Express <input type="checkbox"/> Sampler <input type="checkbox"/> Other				Air Bill Number:			

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

1078267



Sample Condition Upon Receipt

Client Name: BARRProject # 1078267Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

Optional
Proj. Due Date
Proj. Name

Custody Seal on Cooler/Box Present: yes no Seals intact: yes noPacking Material: Bubble Wrap Bubble Bags None OtherTemp Blank: Yes No Thermometer Used 80344042, 179425Type of Ice: Wet Blue None Samples on ice - cooling process has begunCooler Temperature 3.2Biological Tissue Is Frozen: Yes NoDate and Initials of person examining contents: 8508

Temp should be above freezing to 6°C

Comments: _____

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>UT/SL</u>	
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Per method, VOA preservation is checked after analysis		Initial when completed Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16. received water TB
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (If purchased):	<u>062708-3</u>	

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Andrea NDate/Time: 8/16/08Comments/ Resolution: Separate Pace # 1078267-005 through 011 and put on different reports.Project Manager Review: ScruDate: 8/16/08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, Incorrect containers)

August 14, 2008

Ms. Andrea Nord
Barr Engineering
4700 West 77th Street
Minneapolis, MN 55435

RE: Project: 23/73-0162007102 ME
Pace Project No.: 1078321

Dear Ms. Nord:

Enclosed are the analytical results for sample(s) received by the laboratory between August 05, 2008 and August 06, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Shanna Miller

shanna.miller@pacelabs.com
Project Manager

Florida (Nelap) Certification #: E87605
Illinois Certification #: 200011
Iowa Certification #: 368
Minnesota Certification #: 027-053-137
Wisconsin Certification #: 999407970

Enclosures

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 23/73-0162007102 ME

Pace Project No.: 1078321

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1078321001	HOLD	Air	08/06/08 00:00	08/06/08 12:05
1078267005	PB-1a, 54'-57'	Water	08/04/08 15:50	08/05/08 17:03
1078267006	PB-1a, 64'-67'	Water	08/04/08 17:15	08/05/08 17:03

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SAMPLE ANALYTE COUNT

Project: 23/73-0162007102 ME

Pace Project No.: 1078321

Lab ID	Sample ID	Method	Analysts	Analytics Reported
1078267005	PB-1a, 54'-57'	EPA 8260	CNC	17
1078267006	PB-1a, 64'-67'	EPA 8260	CNC	17

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007102 ME

Pace Project No.: 1078321

Method: **EPA 8260**

Description: 8260 MSV

Client: Barr Engineering

Date: August 14, 2008

General Information:

2 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

pH: Post-analysis pH measurement indicates insufficient VOA sample preservation.

- PB-1a, 54'-57' (Lab ID: 1078267005)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: MSV/10600

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

- LCSD (Lab ID: 510293)
 - 1,4-Dioxane (p-Dioxane)

R1: RPD value was outside control limits.

- LCSD (Lab ID: 510293)
 - 1,4-Dioxane (p-Dioxane)

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23/73-0162007102 ME

Pace Project No.: 1078321

Method: EPA 8260

Description: 8260 MSV

Client: Barr Engineering

Date: August 14, 2008

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078321

Sample: PB-1a, 54'-57'	Lab ID: 1078267005	Collected: 08/04/08 15:50	Received: 08/05/08 17:03	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/11/08 17:32	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/11/08 17:32	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/11/08 17:32	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/11/08 17:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/11/08 17:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/11/08 17:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 17:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 17:32	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/11/08 17:32	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/11/08 17:32	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/11/08 17:32	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/11/08 17:32	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/11/08 17:32	75-01-4	
1,2-Dichloroethane-d4 (S)	84 %		75-125	1		08/11/08 17:32	17060-07-0	pH
Dibromofluoromethane (S)	91 %		75-125	1		08/11/08 17:32	1868-53-7	
4-Bromofluorobenzene (S)	86 %		75-125	1		08/11/08 17:32	460-00-4	
Toluene-d8 (S)	85 %		75-125	1		08/11/08 17:32	2037-26-5	

Date: 08/14/2008 04:25 PM

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ANALYTICAL RESULTS

Project: 23/73-0162007102 ME

Pace Project No.: 1078321

Sample: PB-1a, 64'-67'	Lab ID: 1078267006	Collected: 08/04/08 17:15	Received: 08/05/08 17:03	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		08/11/08 17:54	71-43-2	
Chloroform	ND	ug/L	1.0	1		08/11/08 17:54	67-66-3	
Chloromethane	3.3	ug/L	1.0	1		08/11/08 17:54	74-87-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/11/08 17:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/11/08 17:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/11/08 17:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 17:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/11/08 17:54	156-60-5	
1,4-Dioxane (p-Dioxane)	ND	ug/L	80.0	1		08/11/08 17:54	123-91-1	
Tetrachloroethene	ND	ug/L	1.0	1		08/11/08 17:54	127-18-4	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/11/08 17:54	71-55-6	
Trichloroethene	ND	ug/L	1.0	1		08/11/08 17:54	79-01-6	
Vinyl chloride	ND	ug/L	0.40	1		08/11/08 17:54	75-01-4	
1,2-Dichloroethane-d4 (S)	86 %		75-125	1		08/11/08 17:54	17060-07-0	
Dibromofluoromethane (S)	101 %		75-125	1		08/11/08 17:54	1868-53-7	
4-Bromofluorobenzene (S)	100 %		75-125	1		08/11/08 17:54	460-00-4	
Toluene-d8 (S)	85 %		75-125	1		08/11/08 17:54	2037-26-5	

Date: 08/14/2008 04:25 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 23/73-0162007102 ME

Pace Project No.: 1078321

QC Batch:	MSV/10600	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	1078267005, 1078267006		

METHOD BLANK: 510291

Associated Lab Samples: 1078267005, 1078267006

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	
1,1-Dichloroethane	ug/L	ND	1.0	
1,1-Dichloroethene	ug/L	ND	1.0	
1,2-Dichloroethane	ug/L	ND	1.0	
1,4-Dioxane (p-Dioxane)	ug/L	ND	80.0	
Benzene	ug/L	ND	1.0	
Chloroform	ug/L	ND	1.0	
Chloromethane	ug/L	ND	1.0	
cis-1,2-Dichloroethene	ug/L	ND	1.0	
Tetrachloroethene	ug/L	ND	1.0	
trans-1,2-Dichloroethene	ug/L	ND	1.0	
Trichloroethene	ug/L	ND	1.0	
Vinyl chloride	ug/L	ND	0.40	
1,2-Dichloroethane-d4 (S)	%	87	75-125	
4-Bromofluorobenzene (S)	%	91	75-125	
Dibromofluoromethane (S)	%	93	75-125	
Toluene-d8 (S)	%	86	75-125	

LABORATORY CONTROL SAMPLE & LCSD: 510292 510293

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.6	17.9	93	90	75-132	4	20	
1,1-Dichloroethane	ug/L	20	17.0	16.2	85	81	75-125	5	20	
1,1-Dichloroethene	ug/L	20	18.4	17.8	92	89	75-127	3	20	
1,2-Dichloroethane	ug/L	20	17.1	17.4	86	87	75-125	1	20	
1,4-Dioxane (p-Dioxane)	ug/L	400	399	536	100	134	70-126	29	20	L3,R1
Benzene	ug/L	20	19.6	19.3	98	96	75-125	2	20	
Chloroform	ug/L	20	18.2	17.3	91	87	75-125	5	20	
Chloromethane	ug/L	20	15.4	14.2	77	71	67-135	8	20	
cis-1,2-Dichloroethene	ug/L	20	20.0	19.5	100	97	75-125	3	20	
Tetrachloroethene	ug/L	20	18.2	17.9	91	89	75-125	2	20	
trans-1,2-Dichloroethene	ug/L	20	19.4	17.9	97	89	75-125	8	20	
Trichloroethene	ug/L	20	18.5	18.0	92	90	75-125	2	20	
Vinyl chloride	ug/L	20	16.4	14.8	82	74	71-133	10	20	
1,2-Dichloroethane-d4 (S)	%				82	80	75-125			
4-Bromofluorobenzene (S)	%				96	96	75-125			
Dibromofluoromethane (S)	%				97	96	75-125			
Toluene-d8 (S)	%				86	87	75-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 23/73-0162007102 ME

Pace Project No.: 1078321

Parameter	Units	1078100004		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max
		Result	Spike Conc.	Spike	Conc.	MS	Result	MSD	Result	% Rec	MSD				
1,1,1-Trichloroethane	ug/L	ND	20	20	18.9	20.1	95	101	75-140	6	30				
1,1-Dichloroethane	ug/L	ND	20	20	16.7	17.8	83	89	70-140	6	30				
1,1-Dichloroethene	ug/L	ND	20	20	18.4	20.0	92	100	75-141	8	30				
1,2-Dichloroethane	ug/L	ND	20	20	16.4	17.4	82	87	75-130	6	30				
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	400	463	512	116	128	63-128	10	30				
Benzene	ug/L	ND	20	20	19.6	20.7	94	100	75-126	6	30				
Chloroform	ug/L	ND	20	20	17.6	19.0	88	95	75-134	7	30				
Chloromethane	ug/L	ND	20	20	15.5	16.5	77	82	61-148	6	30				
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.6	20.6	98	103	65-148	5	30				
Tetrachloroethene	ug/L	ND	20	20	19.0	19.9	95	99	75-133	5	30				
trans-1,2-Dichloroethene	ug/L	ND	20	20	18.0	19.2	90	96	75-138	6	30				
Trichloroethene	ug/L	ND	20	20	19.0	20.0	95	100	75-130	5	30				
Vinyl chloride	ug/L	ND	20	20	16.9	17.1	84	85	64-150	1	30				
1,2-Dichloroethane-d4 (S)	%						80	84	75-125						
4-Bromofluorobenzene (S)	%						94	98	75-125						
Dibromofluoromethane (S)	%						92	94	75-125						
Toluene-d8 (S)	%						82	87	75-125						

Date: 08/14/2008 04:25 PM

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 23/73-0162007102 ME

Pace Project No.: 1078321

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

R1 RPD value was outside control limits.

pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

1078321 1078267

Chain of Custody**BARR**

4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

Project Number

2,3,1,7,3,-0,1,6,2,0,0,7,1,0,2

Project Name

ME

No 26368

Sample Identification	Collection		Matrix	Type		Number of Containers/Preservative		COC 1 of 1
				Water	Soil	Grab	Comp.	
	Date	Time		QC				
1. PB-3, 41'-44'	8/4/08	10:45	X		X			3
2. PB-3, 46'-49'	8/4/08	11:00	X		X			3
3. PB-3, 51'-54'	8/4/08	12:25	X		X			3
4. PB-3, 62'-63' bottom	8/4/08	12:50	X		X			3
5. PB-1a, 54'-57'	8/4/08	15:50	X		X			3
6. PB-1a, 64'-67'	8/4/08	17:15	X		X			3
7. Dup B	-	-	X		X			3
8. FB-3	8/4/08	-	X		X			3
9.								
Cuttings 7/21/08	8/4/08	18:40	X		X			1
10.								12
decon/purge water 7/21/08	8/4/08	18:45	X		X			4 HOLD
11.								009
decon/purge water 8/4/08	8/4/08	18:50	X		X			3 HOLD
12.								010
								011

Common Parameter/Container - Preservation Key

*1 - Volatile Organics = BTEX, GRO, TPH, Full List

*2 - Semivolatile Organics = PAHs, PCP, Dioxins, Full List, Herbicide/Pesticide/PCBs

*3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate

*4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By:	On Ice?	Date	Time	Received by:	Place	Date	Time
Laura Laura	<input checked="" type="radio"/> Y <input type="radio"/> N	8/16/08	1703	J	PACE	8/15/08	1703
Relinquished By:	On Ice?	Date	Time	Received by:			
	<input checked="" type="radio"/> Y <input type="radio"/> N						
Samples Shipped VIA:	<input type="checkbox"/> Air Freight <input type="checkbox"/> Federal Express <input type="checkbox"/> Sampler <input type="checkbox"/> Other				Air Bill Number:		

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

Sample Condition Upon Receipt

1078321

Client Name: BARR

Project #: 1078267

Scn 8/6/08

Courier: FedEx UPS USPS Client Commercial Pace Other
Tracking #: _____

Optional	Print Date
Print Name	

Custody Seal on Cooler/Box Present: yes No Seals intact: yes No

Packing Material: Bubble Wrap Bubble Bags None Other Temp Blank: Yes No

Thermometer Used 80344042, 79425 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 3.2

Biological Tissue Is Frozen: Yes No

Comments: _____

Date and Initials of person examining contents: 8508

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Per method, VOA preservation is checked after analysis		Initial when completed Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16. received water TB
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	<u>062308-3</u>	

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Andrea N

Date/Time: 8/6/08 (phone)

Comments/ Resolution: Run Pace HS 1078321 1078267-005, -006
as Barn samples. Put on separate report.

Project Manager Review:

Scn

Date: 8/6/08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Appendix E

Annual Groundwater Monitoring – Laboratory Analytical Report

BARR

Barr Engineering Company
Field Log Data Sheet

Client: AB33/Cooper Industries		Monitoring Point: EM 24D						
Location: Formula 800 site		Date: 8-22-08						
Project #: SC-06-04965B		Sample Time:						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Yes #32437	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	4"							
Total well depth:*	49.23	20g	14.84	.571	7.14	-27.8	1.75	Cloudy
Static water level:*	19.32	40g	14.85	.571	7.15	-27.9	1.8	clear
Water depth:*	29.91	60g	14.90	.571	7.14	-28.0	1.76	clear
Well volume: (gal)	19.53							
Purge method:	Pump							
Sample method:	Pump							
Start time:	1:30 pm	Odor: None						
Stop time:	1:50 pm	Purge Appearance: clear						
Duration: (minutes)		Sample Appearance: clear						
Rate, gpm:		Comments:						
Volume, purged:	60 gal.							
Duplicate collected?	No							
Sample collection by:	AB	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:		Well Condition: good						
MW: groundwater monitoring well	WS: water supply well	SW: surface water	SE: sediment	other:				
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others:								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR

Barr Engineering Company
Field Log Data Sheet

Client: ABB/Copper Industries		Monitoring Point: NW-2D						
Location: Former Em site		Date: 8-22-08						
Project #: SC-06-04965B		Sample Time:						
GENERAL DATA		STABILIZATION TEST						
Barr lock:		Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	4"							
Total well depth:*	63.91'	30 g	16.14	.749	6.98	-41.8	1.23	slight cloudy
Static water level:*	27.81'	60 g	16.15	.749	6.98	-42.0	1.25	clear
Water depth:*	36.1	70 g	16.16	.750	6.98	-42.1	1.24	clear
Well volume: (gal)	23.57							
Purge method:	pump							
Sample method:	pump							
Start time:	2:10 pm	Odor: none						
Stop time:		Purge Appearance: clear						
Duration: (minutes)		Sample Appearance: clear						
Rate, gpm:		Comments:						
Volume, purged:	70 gal.							
Duplicate collected?	no							
Sample collection by:	AB	CO ₂ -	Mn ²⁺ -	Fe(T)-	Fe ²⁺ -			
Others present:		Well Condition: cloudy						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment	other:	
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others:								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR**Barr Engineering Company
Field Log Data Sheet**

Client: ABB/Cooper Industries		Monitoring Point: EM 22 D						
Location: Former Env site		Date: 8-22-08						
Project #: SC-06-04965B		Sample Time:						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	4"							
Total well depth:*	42.85'	10 gal	15.21	740	6.63	11.0	1.89	Slightly cloudy
Static water level:*	26.03'	20 gal	15.22	740	6.64	10.9	1.91	clear
Water depth:*	16.82	30 gal	15.22	740	6.63	10.8	1.87	clear
Well volume: (gal)	10.98 gal							
Purge method:	pump							
Sample method:	pump							
Start time:	12:55 pm	Odor:	none					
Stop time:	1:15 pm	Purge Appearance:	clear					
Duration: (minutes)		Sample Appearance:	clear					
Rate, gpm:		Comments:						
Volume, purged:	33.0 gal	duplicate - EM 22 D X						
Duplicate collected?	yes							
Sample collection by:	AB	CO ₂ -	Mn2-	Fe(T)-	Fe2-			
Others present:		Well Condition: good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment	other:	
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others:								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR**Barr Engineering Company
Field Log Data Sheet**

Client: ABB Cooper Industries		Monitoring Point: EM-105						
Location: Former Em site		Date: 8-21-08						
Project #: SC-06-04965B		Sample Time:						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2"							
Total well depth:*	25.2'							
Static water level:*	21.2'							
Water depth:*								
Well volume: (gal)								
Purge method:								
Sample method:								
Start time:		Odor:						
Stop time:		Purge Appearance:						
Duration: (minutes)		Sample Appearance:						
Rate, gpm:		Comments:						
Volume, purged:								
Duplicate collected?								
Sample collection by:	AB	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:		Well Condition:						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment	other:	
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others:								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR**Barr Engineering Company
Field Log Data Sheet**

Client: ABB/Cooper Industries		Monitoring Point: EM9M						
Location: Former EM site		Date: 8-22-08						
Project #: SC-06-0496SB		Sample Time:						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	YES	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2"							
Total well depth:*	32.74'	1 gal	16.57	.899	7.09	53.4	3.65	cloudy
Static water level:*	25.07'	2 gal	16.58	.898	7.09	53.4	3.65	cloudy
Water depth:*	7.67	3 gal	16.57	.897	7.09	53.4	3.65	Slightly Cloudy
Well volume: (gal)	1.25 gal							
Purge method:	baiter							
Sample method:	baiter							
Start time:	11:30 am	Odor:	None					
Stop time:		Purge Appearance:	Slightly cloudy					
Duration: (minutes)		Sample Appearance:	clear					
Rate, gpm:		Comments:	well slightly bent.					
Volume, purged:	3.75 gal							
Duplicate collected?	NO							
Sample collection by:	AB	CO ₂ -	Mn ²⁺ -	Fe(T)-	Fe ²⁺ -			
Others present:		Well Condition:						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment	other:	
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil,grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others:								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company
Field Log Data Sheet

Client: ABB/Couper Industries		Monitoring Point: EM95						
Location: Former EM site		Date: 8-21-08						
Project #: SC-06-04965 B		Sample Time:						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	No	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	2"							
Total well depth:*	20.5'							
Static water level:*	20.35' - dry							
Water depth:*								
Well volume: (gal)								
Purge method:								
Sample method:								
Start time:								
Stop time:		Purge Appearance:						
Duration: (minutes)		Sample Appearance:						
Rate, gpm:		Comments: dry? - did not sample - dry 8-22-08						
Volume, purged:								
Duplicate collected?								
Sample collection by:	Andy B.	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:		Well Condition: Good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment	other:	
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others:								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Barr Engineering Company
Field Log Data Sheet

Client: ABB/Cooper Industries		Monitoring Point: EM4S						
Location: Former EM site		Date: 8-22-08						
Project #: SC-06-04965B		Sample Time: 8:30 am						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Brown	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	Mg/L D.O.	Turbidity Appearance
Casing diameter:	2"							
Total well depth:*	20.59'							
Static water level:*	12.5'							
Water depth:*	8.09							
Well volume: (gal)	1.32 gal							
Purge method:	baiter							
Sample method:	baiter							
Start time:	10:15 am							
Stop time:	10:30 am	Odor: none						
Duration: (minutes)	15	Purge Appearance: light tan - cloudy						
Rate, gpm:		Comments:						
Volume, purged:	3.95 gal							
Duplicate collected?	No							
Sample collection by:	AB	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:		Well Condition: good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment	other:	
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others:								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR

Barr Engineering Company
Field Log Data Sheet

Client: <i>ADB/Cooper</i>		Monitoring Point: <i>EM85</i>						
Location: <i>For EM site</i>		Date: <i>8-22-08</i>						
Project #: <i>SC 06 049658</i>		Sample Time:						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	<i>No</i>	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	<i>2"</i>							
Total well depth:*	<i>25.61'</i>	<i>.25</i>	<i>17.21</i>	<i>.991</i>	<i>7.22</i>	<i>91.6</i>	<i>8.04</i>	<i>cloudy</i>
Static water level:*	<i>24.15'</i>	<i>.5</i>	<i>17.22</i>	<i>.987</i>	<i>7.23</i>	<i>91.7</i>	<i>8.0</i>	<i>"</i>
Water depth:*	<i>1.46</i>	<i>.75</i>	<i>17.23</i>	<i>.995</i>	<i>7.22</i>	<i>91.8</i>	<i>7.98</i>	<i>"</i>
Well volume: (gal)	<i>.24 gal</i>							
Purge method:	<i>bottle</i>							
Sample method:	<i>bottle</i>							
Start time:	<i>11:05</i>	Odor:						
Stop time:	<i>11:25</i>	Purge Appearance:						
Duration: (minutes)	<i>20 min</i>	Sample Appearance:						
Rate, gpm:		Comments:						
Volume, purged:	<i>.74 gals.</i>	<i>- Well almost dry</i> <i>- New well by fract</i>						
Duplicate collected?	<i>No</i>							
Sample collection by:	<i>AB</i>	CO ₂ -	Mn ²⁺ -	Fe(T)-	Fe ²⁺ -			
Others present:		Well Condition:						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment	other:	
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others:								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR

Barr Engineering Company
Field Log Data Sheet

Client: ABB/Cooper Industries		Monitoring Point: EM8D						
Location: Former Em site		Date: 8-22-08						
Project #: SC-06-04965 B		Sample Time: 12:55 pm						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:	4"							
Total well depth:*	74.5'	25g	14.87	.672	6.66	-36.1	1.36	cloudy
Static water level:*	24.2'	50g	14.88	.672	6.67	-36.2	1.35	clear
Water depth:*	50.3	75g	14.88	.672	6.67	-36.3	1.35	clear
Well volume: (gal)	32.85							
Purge method:	pump							
Sample method:	pump							
Start time:	2:55 pm	Odor: none						
Stop time:		Purge Appearance: clear						
Duration: (minutes)		Sample Appearance: clear						
Rate, gpm:		Comments:						
Volume, purged:	98 gal							
Duplicate collected?	No							
Sample collection by:	AB	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:		Well Condition: good						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment	other:	
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others:								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR**Barr Engineering Company
Field Log Data Sheet**

Client: ABB/Copper Industries		Monitoring Point: EM2-40D						
Location: Former EM site		Date: 8-21-08						
Project #: SC-06-04965B		Sample Time:						
GENERAL DATA		STABILIZATION TEST						
Barr lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance
Casing diameter:								
Total well depth:*	96.41							
Static water level:*	12.08'							
Water depth:								
Well volume: (gal)								
Purge method:								
Sample method:								
Start time:		Odor:						
Stop time:		Purge Appearance:						
Duration: (minutes)		Sample Appearance:						
Rate, gpm:		Comments:						
Volume, purged:								
Duplicate collected?								
Sample collection by:	Andy B.	CO2-	Mn2-	Fe(T)-	Fe2-			
Others present:		Well Condition:						
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment	other:	
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-		
oil, grease-	bacteria-	total metal-	filtered metal-	methane-		filter-		
Others:								

*Measurements are referenced from top of riser pipe, unless otherwise indicated.

BARR**Barr Engineering Company
Field Log Data Sheet**

Client: ABB/Cooper Industries		Monitoring Point: EM-405												
Location: Former EM Site		Date: 8-21-08												
Project #: SC-06-04965B		Sample Time:												
GENERAL DATA		STABILIZATION TEST												
Barr lock:	Yes	Time/ Volume	Temp. °C	Cond. @ 25	pH	Eh	D.O.	Turbidity Appearance						
Casing diameter:														
Total well depth:*	18.25'													
Static water level:*	11.43'													
Water depth:														
Well volume: (gal)														
Purge method:														
Sample method:														
Start time:									Odor:					
Stop time:									Purge Appearance:					
Duration: (minutes)		Sample Appearance:												
Rate, gpm:		Comments:												
Volume, purged:														
Duplicate collected?														
Sample collection by:	Andy B.	CO2-	Mn2-	Fe(T)-	Fe2-									
Others present:		Well Condition:												
MW: groundwater monitoring well		WS: water supply well		SW: surface water		SE: sediment	other:							
VOC-	semi-volatile-	general-	nutrient-	cyanide-	DRO-	Sulfide-								
oil, grease-	bacteria-	total metal-	filtered metal-	methane-		filter-								
Others:														

*Measurements are referenced from top of riser pipe, unless otherwise indicated.



Braun Intertec Corporation
11001 Hampshire Avenue S.
Minneapolis, MN 55438

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Fax: 952.995.2020
Web: braunintertec.com

Mr. Andy Brummer
Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

September 10, 2008

Work Order #: 0805225

RE: Electric Machinery Site
SC-06-04965B

Dear Andy Brummer:

Braun Intertec Corporation received samples for the project identified above on August 27, 2008. Analytical results are summarized in the following report.

All routine quality assurance procedures were followed, unless otherwise noted.

Analytical results are reported on an "as received" basis unless otherwise noted. Where possible, the samples will be retained by the laboratory for 14 days following issuance of the initial final report. The samples will be disposed of or returned at that time. Arrangements can be made for extended storage by contacting me at this time.

We appreciate your decision to use Braun Intertec Corporation for this project. We are committed to being your vendor of choice to meet your analytical chemistry needs.

If you have any questions please contact me at the above phone number.

Sincerely,

William R. Dahl
Senior Scientist



Certification/Accreditation Numbers

Minnesota Department of Health: 027-053-117 Wisconsin DNR: 999462640 NVLAP: 101234-0 AIHA: 101103

Providing engineering and environmental solutions since 1957

Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

How to Use this Report

In order to get the most out of the information presented in this report please refer to the following explanations as to how the data in this report is tied together and how some of the terms are defined.

Qualifiers and Abbreviations are defined in the following section. You will find these codes used throughout the report in headers and in note sections to designate a unique fact about the data to which they are associated.

The Case Narrative gives a “story” about the analysis and results. Here you will find greater elaboration on relevant qualifiers as well as an explanation of anything of particular note in the data. This is a discussion of the data in terms of quality control and chemistry. It is a summary of any deviations that could affect the usefulness of the data. This is not an interpretation as to how this information relates to regulatory compliance, toxicity, or hazardous characterization. These items are beyond the scope of this report.

The Sample Summary provides detail on sample receipt. The association between Client sample ID and the Laboratory sample ID are defined here; this information is valuable to have when discussing results with your project manager. Sample collection and receipt dates and times are provided here as well. General notes regarding the work order are also documented here. This is a mini “case narrative” that describes any anomalies regarding the condition of the samples upon arrival to the laboratory or special circumstances regarding the work order.

The Conditions Upon Receipt summarizes the results of specific checks that have been performed at sample receipt. This includes items like custody documentation, sample condition, and temperature at receipt. Each “cooler” is identified and the conditions associated with that cooler are documented. A “cooler” is defined as the larger container used to transport the individual samples. In most cases this is a standard recreational cooler but it can be a box, plastic bag, or other container.

The laboratory results are summarized in the following sections. Data is broken down into major categories for convenience. An example of such a category would be “Total Petroleum Hydrocarbons.” Here you would find data that references the testing of such parameters as diesel range organics and gasoline range organics. Other categories are similarly mapped. The batch number is associated with each sample. This is important to evaluate Quality Control (QC) data. Surrogate results samples are provided with each sample. Laboratory control limits are provided for comparison (see below). The reference method is also identified. If a method is denoted with an “M” (e.g. EPA 1234(M)) this means that it has been modified. An explanation of the modification will be found in the Case Narrative. A result is given with appropriate units. If a soil sample is dry-weight corrected then the word “dry” will appear next to the units. If the word “dry” does not appear then the result is “as received.”

The Method Reporting Limit (MRL) is provided. It is important to understand this term. The MRL is a level that has been empirically verified to provide reliable quantification of results. Results that are equal to or greater than this value will show up as bolded. They are considered “hits.” If a result is less than the MRL, the result is given as less than the MRL (e.g. if the MRL = 10 then a less than would be given as “< 10”).

The Quality Control (QC) samples are documented in the following section. Here you will find the preparation batches associated with each sample from the results section. The sample preparation method is also defined here. Accuracy is represented in terms of a percent recovery as compared to a known value. Precision is represented as a relative percent difference between two duplicate sample aliquots. The laboratory control limits are provided as a means to evaluate the quality control data. If the result falls outside the laboratory control limits this simply means that it is outside what is typical for the laboratory and is noted accordingly. This does not mean that the data is invalid. Laboratory control limits are generally tighter than most program limits. This is a very important distinction. How the data is ultimately used determines its validity. Program requirements are defined in the Quality Assurance Project Plan (QAPP) governing the project. If your project manager is aware of your specific program requirements then a note will be made in the case narrative if the data fails to meet any of these requirements.

The last section contains copies of important documents and/or instrument printouts relevant to the report. This includes the chain of custody. It also may include items like chromatograms or spectra.

Please note that this report is paginated and must be reproduced in its entirety.



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Qualifiers and Abbreviations

vfa	The method reporting limit (MRL) was raised for one or more analytes; a dilution of the sample was necessary due to high analyte levels and/or matrix interferences.
COC	Chain of Custody
dry	Sample results reported on a dry weight basis
MRL	Method Reporting Limit
NA	Not Applicable
ND	Analyte NOT DETECTED
NR	Not Reported
%Rec	Percent Recovery
RPD	Relative Percent Difference
VOC	Volatile Organic Compound



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Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

SAMPLE SUMMARY

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EM-4S	0805225-01	Water	08/22/08 00:00	08/27/08 08:00
EM-8D	0805225-02	Water	08/22/08 00:00	08/27/08 08:00
NW-2D	0805225-03	Water	08/22/08 00:00	08/27/08 08:00
EM-24D	0805225-04	Water	08/22/08 00:00	08/27/08 08:00
EM-22D	0805225-05	Water	08/22/08 00:00	08/27/08 08:00
EM-8S	0805225-06	Water	08/22/08 00:00	08/27/08 08:00
EM-9M	0805225-07	Water	08/22/08 00:00	08/27/08 08:00
Trip	0805225-08	Water	08/22/08 00:00	08/27/08 08:00
EM-22DX	0805225-09	Water	08/22/08 00:00	08/27/08 08:00



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Account ID:

Conditions Upon Receipt

Cooler: Cooler #1

Temperature: 4.6 °C

COC Included: Yes

Custody Seals Used: No

Custody Seals Intact: No

Received on Ice: Yes

Hand Delivered by Sampler: No

Sufficient Sample Provided: Yes

Headspace Present (VOC): No

Preservation Confirmed: No

Temperature Blank: No

COC Complete: Yes

COC & Labels Agree: Yes

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 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-4S
0805225-01 (Water)
8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloroethane	3.7	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloropropene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,4-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dibromoethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3,5-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2,2-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2-Butanone (MEK)	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
4-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
4-Isopropyltoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Acetone	< 15	15	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Allyl Chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Benzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromochloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromodichloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromoform	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Carbon Tetrachloride	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	

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 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-4S
0805225-01 (Water)
8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chlorodibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloroform	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
cis-1,2-Dichloroethene	1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dichlorodifluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Ethyl Ether	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Ethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Hexachlorobutadiene	< 2.0	2.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Isopropylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
m,p-Xylenes	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methyl Isobutyl Ketone	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methylene chloride	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methyl-t-butyl ether	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Naphthalene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
n-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
n-Propylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
o-Xylene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
sec-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Styrene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
tert-Butylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Tetrachloroethene	5.7	2.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Tetrahydrofuran	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Toluene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Trichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Trichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Vinyl chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>86.8 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>102 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

EM-4S

0805225-01 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Toluene-d8	100 %	Limits: 80-120%			B8I0041	9/2/08	9/2/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-8D
0805225-02 (Water)
8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloropropene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,4-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dibromoethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3,5-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2,2-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2-Butanone (MEK)	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
4-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
4-Isopropyltoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Acetone	< 15	15	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Allyl Chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Benzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromochloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromodichloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromoform	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Carbon Tetrachloride	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-8D
0805225-02 (Water)
8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chlorodibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloroform	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
cis-1,2-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dichlorodifluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Ethyl Ether	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Ethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Hexachlorobutadiene	< 2.0	2.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Isopropylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
m,p-Xylenes	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methyl Isobutyl Ketone	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methylene chloride	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methyl-t-butyl ether	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Naphthalene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
n-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
n-Propylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
o-Xylene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
sec-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Styrene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
tert-Butylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Tetrachloroethene	< 2.0	2.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Tetrahydrofuran	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Toluene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Trichloroethene	4.4	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Trichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Vinyl chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.0 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>101 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

EM-8D

0805225-02 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Toluene-d8	103 %	Limits: 80-120%			B8I0041	9/2/08	9/2/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

NW-2D
0805225-03 (Water)
8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloroethane	7.9	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloroethene	1.4	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloropropene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,4-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dibromoethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3,5-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2,2-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2-Butanone (MEK)	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
4-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
4-Isopropyltoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Acetone	< 15	15	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Allyl Chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Benzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromochloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromodichloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromoform	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Carbon Tetrachloride	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

NW-2D
0805225-03 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chlorodibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloroform	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
cis-1,2-Dichloroethene	4.6	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dichlorodifluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Ethyl Ether	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Ethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Hexachlorobutadiene	< 2.0	2.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Isopropylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
m,p-Xylenes	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methyl Isobutyl Ketone	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methylene chloride	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methyl-t-butyl ether	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Naphthalene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
n-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
n-Propylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
o-Xylene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
sec-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Styrene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
tert-Butylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Tetrachloroethene	39	2.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Tetrahydrofuran	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Toluene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Trichloroethene	22	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Trichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Vinyl chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>86.4 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>101 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

NW-2D

0805225-03 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Toluene-d8	100 %	Limits: 80-120%			B8I0041	9/2/08	9/2/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-24D
0805225-04 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1-Dichloropropene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2,4-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dibromoethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,3,5-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,3-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
2,2-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
2-Butanone (MEK)	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
2-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
4-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
4-Isopropyltoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Acetone	< 15	15	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Allyl Chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Benzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromochloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromodichloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromoform	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Carbon Tetrachloride	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Chlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-24D
0805225-04 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chlorodibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Chloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Chloroform	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Chloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
cis-1,2-Dichloroethene	7.3	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Dibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Dichlorodifluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Dichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Ethyl Ether	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Ethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Hexachlorobutadiene	< 2.0	2.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Isopropylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
m,p-Xylenes	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Methyl Isobutyl Ketone	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Methylene chloride	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Methyl-t-butyl ether	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Naphthalene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
n-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
n-Propylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
o-Xylene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
sec-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Styrene	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
tert-Butylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Tetrachloroethene	< 2.0	2.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Tetrahydrofuran	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Toluene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
trans-1,2-Dichloroethene	1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Trichloroethene	85	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Trichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Vinyl chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/3/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.8 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/3/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>103 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/3/08</i>	<i>EPA 8260B</i>	



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

EM-24D

0805225-04 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Toluene-d8	102 %	Limits: 80-120%			B8I0041	9/2/08	9/3/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-22D
0805225-05 (Water)
8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,1-Trichloroethane	3.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloroethane	11	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloroethene	1.2	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloropropene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,4-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dibromoethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3,5-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2,2-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2-Butanone (MEK)	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
4-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
4-Isopropyltoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Acetone	< 15	15	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Allyl Chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Benzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromochloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromodichloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromoform	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Carbon Tetrachloride	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-22D
0805225-05 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chlorodibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloroform	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
cis-1,2-Dichloroethene	40	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dichlorodifluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Ethyl Ether	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Ethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Hexachlorobutadiene	< 2.0	2.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Isopropylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
m,p-Xylenes	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methyl Isobutyl Ketone	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methylene chloride	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methyl-t-butyl ether	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Naphthalene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
n-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
n-Propylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
o-Xylene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
sec-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Styrene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
tert-Butylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Tetrachloroethene	28	2.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Tetrahydrofuran	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Toluene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
trans-1,2-Dichloroethene	1.6	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Trichloroethene	29	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Trichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Vinyl chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>113 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>86.8 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>102 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

EM-22D

0805225-05 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Toluene-d8	100 %	Limits: 80-120%			B8I0041	9/2/08	9/2/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-8S
0805225-06 (Water)
8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloropropene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,4-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dibromoethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3,5-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2,2-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2-Butanone (MEK)	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
4-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
4-Isopropyltoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Acetone	< 15	15	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Allyl Chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Benzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromochloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromodichloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromoform	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Carbon Tetrachloride	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

EM-8S

0805225-06 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chlorodibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloroform	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
cis-1,2-Dichloroethene	84	10	ug/L	10	B8I0042	9/3/08	9/3/08	EPA 8260B	vfa
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dichlorodifluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Ethyl Ether	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Ethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Hexachlorobutadiene	< 2.0	2.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Isopropylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
m,p-Xylenes	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methyl Isobutyl Ketone	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methylene chloride	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methyl-t-butyl ether	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Naphthalene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
n-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
n-Propylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
o-Xylene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
sec-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Styrene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
tert-Butylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Tetrachloroethene	4.6	2.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Tetrahydrofuran	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Toluene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Trichloroethene	1.5	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Trichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Vinyl chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>112 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.0 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>102 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/2/08</i>	<i>EPA 8260B</i>	



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

EM-8S

0805225-06 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Toluene-d8	101 %	Limits: 80-120%			B8I0041	9/2/08	9/2/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-9M
0805225-07 (Water)
8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1-Dichloroethane	2.6	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1-Dichloropropene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2,4-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dibromoethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,3,5-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,3-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
2,2-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
2-Butanone (MEK)	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
2-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
4-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
4-Isopropyltoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Acetone	< 15	15	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Allyl Chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Benzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromochloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromodichloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromoform	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Carbon Tetrachloride	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Chlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-9M
0805225-07 (Water)
8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chlorodibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Chloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Chloroform	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Chloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
cis-1,2-Dichloroethene	2.1	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Dibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Dichlorodifluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Dichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Ethyl Ether	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Ethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Hexachlorobutadiene	< 2.0	2.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Isopropylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
m,p-Xylenes	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Methyl Isobutyl Ketone	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Methylene chloride	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Methyl-t-butyl ether	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Naphthalene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
n-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
n-Propylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
o-Xylene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
sec-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Styrene	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
tert-Butylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Tetrachloroethene	95	80	ug/L	40	B8I0041	9/2/08	9/3/08	EPA 8260B	
Tetrahydrofuran	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Toluene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Trichloroethene	82	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Trichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Vinyl chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>111 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/3/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>88.0 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/3/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>102 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/3/08</i>	<i>EPA 8260B</i>	



11001 Hampshire Ave. S.
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952.995.2000 Phone
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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

EM-9M

0805225-07 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Toluene-d8	99.2 %	Limits: 80-120%			B8I0041	9/2/08	9/3/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

Trip
0805225-08 (Water)
8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,1-Dichloropropene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2,4-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dibromoethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,2-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3,5-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,3-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2,2-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2-Butanone (MEK)	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
2-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
4-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
4-Isopropyltoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Acetone	< 15	15	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Allyl Chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Benzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromochloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromodichloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromoform	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Bromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Carbon Tetrachloride	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

Trip
0805225-08 (Water)
8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chlorodibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloroform	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Chloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
cis-1,2-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dichlorodifluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Dichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Ethyl Ether	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Ethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Hexachlorobutadiene	< 2.0	2.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Isopropylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
m,p-Xylenes	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methyl Isobutyl Ketone	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methylene chloride	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Methyl-t-butyl ether	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Naphthalene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
n-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
n-Propylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
o-Xylene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
sec-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Styrene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
tert-Butylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Tetrachloroethene	< 2.0	2.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Tetrahydrofuran	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Toluene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Trichloroethene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Trichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
Vinyl chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/2/08	EPA 8260B	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	110 %	<i>Limits: 80-120%</i>			B8I0041	9/2/08	9/2/08	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>	89.6 %	<i>Limits: 80-120%</i>			B8I0041	9/2/08	9/2/08	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>	99.6 %	<i>Limits: 80-120%</i>			B8I0041	9/2/08	9/2/08	EPA 8260B	
<i>Surrogate: Toluene-d8</i>	102 %	<i>Limits: 80-120%</i>			B8I0041	9/2/08	9/2/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-22DX
0805225-09 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1,1-Trichloroethane	3.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1-Dichloroethane	11	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1-Dichloroethene	1.1	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,1-Dichloropropene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2,4-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dibromoethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dichloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,2-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,3,5-Trimethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,3-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
2,2-Dichloropropane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
2-Butanone (MEK)	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
2-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
4-Chlorotoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
4-Isopropyltoluene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Acetone	< 15	15	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Allyl Chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Benzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromochloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromodichloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromoform	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Bromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Carbon Tetrachloride	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Chlorobenzene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
 St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

EM-22DX
0805225-09 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chlorodibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Chloroethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Chloroform	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Chloromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
cis-1,2-Dichloroethene	41	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Dibromomethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Dichlorodifluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Dichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Ethyl Ether	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Ethylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Hexachlorobutadiene	< 2.0	2.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Isopropylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
m,p-Xylenes	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Methyl Isobutyl Ketone	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Methylene chloride	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Methyl-t-butyl ether	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Naphthalene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
n-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
n-Propylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
o-Xylene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
sec-Butylbenzene	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Styrene	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
tert-Butylbenzene	< 10	10	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Tetrachloroethene	28	2.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Tetrahydrofuran	< 5.0	5.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Toluene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
trans-1,2-Dichloroethene	1.6	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Trichloroethene	29	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Trichlorofluoromethane	< 1.0	1.0	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
Vinyl chloride	< 2.5	2.5	ug/L	1	B8I0041	9/2/08	9/3/08	EPA 8260B	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/3/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>86.4 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/3/08</i>	<i>EPA 8260B</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>102 %</i>	<i>Limits: 80-120%</i>			<i>B8I0041</i>	<i>9/2/08</i>	<i>9/3/08</i>	<i>EPA 8260B</i>	



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
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Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

EM-22DX

0805225-09 (Water)

8/22/08 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Toluene-d8	100 %	Limits: 80-120%			B8I0041	9/2/08	9/3/08	EPA 8260B	

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
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 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0041 - EPA 5030B

Method Blank (B8I0041-BLK1)

Prepared & Analyzed: 09/02/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1-Dichloropropene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,2,4-Trimethylbenzene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
1,2-Dibromo-3-chloropropane	< 10	10	ug/L	NA	NA	NA	NA	NA	NA	
1,2-Dibromoethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,2-Dichloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,2-Dichloropropane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,3,5-Trimethylbenzene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,3-Dichloropropane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
2,2-Dichloropropane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
2-Butanone (MEK)	< 10	10	ug/L	NA	NA	NA	NA	NA	NA	
2-Chlorotoluene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
4-Chlorotoluene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
4-Isopropyltoluene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
Acetone	< 15	15	ug/L	NA	NA	NA	NA	NA	NA	
Allyl Chloride	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
Benzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Bromobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Bromochloromethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Bromodichloromethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Bromoform	< 5.0	5.0	ug/L	NA	NA	NA	NA	NA	NA	
Bromomethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Carbon Tetrachloride	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Chlorobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	



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Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0041 - EPA 5030B

Method Blank (B8I0041-BLK1)

Prepared & Analyzed: 09/02/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chlorodibromomethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Chloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Chloroform	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Chloromethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Dibromomethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Dichlorofluoromethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	< 2.0	2.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
m,p-Xylenes	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
Methyl Isobutyl Ketone	< 5.0	5.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	< 5.0	5.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Methyl-t-butyl ether	< 10	10	ug/L	NA	NA	NA	NA	NA	NA	NA
Naphthalene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	< 10	10	ug/L	NA	NA	NA	NA	NA	NA	NA
o-Xylene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
Styrene	< 10	10	ug/L	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	< 10	10	ug/L	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	< 2.0	2.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Tetrahydrofuran	< 5.0	5.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Toluene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
Surrogate: 1,2-Dichloroethane-d4	26.0		ug/L	25.0	NA	104	80-120			
Surrogate: 4-Bromo fluoro benzene	23.1		ug/L	25.0	NA	92.4	80-120			
Surrogate: Dibromo fluoro methane	24.6		ug/L	25.0	NA	98.4	80-120			
Surrogate: Toluene-d8	25.4		ug/L	25.0	NA	102	80-120			



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
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Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0041 - EPA 5030B

Laboratory Control Sample (B8I0041-BS1)

Prepared & Analyzed: 09/02/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	25.2	1.0	ug/L	25.0	NA	101	75-125	NA	NA	
1,1,1-Trichloroethane	24.8	1.0	ug/L	25.0	NA	99.2	75-125	NA	NA	
1,1,2,2-Tetrachloroethane	24.7	1.0	ug/L	25.0	NA	98.8	75-125	NA	NA	
1,1,2-Trichloroethane	25.5	1.0	ug/L	25.0	NA	102	75-125	NA	NA	
1,1,2-Trichlorotrifluoroethane	24.0	1.0	ug/L	25.0	NA	96.0	75-125	NA	NA	
1,1-Dichloroethane	25.2	1.0	ug/L	25.0	NA	101	75-125	NA	NA	
1,1-Dichloroethene	24.8	1.0	ug/L	25.0	NA	99.2	75-125	NA	NA	
1,1-Dichloropropene	23.4	2.5	ug/L	25.0	NA	93.6	75-125	NA	NA	
1,2,3-Trichlorobenzene	24.9	1.0	ug/L	25.0	NA	99.6	75-125	NA	NA	
1,2,3-Trichloropropane	25.5	1.0	ug/L	25.0	NA	102	75-125	NA	NA	
1,2,4-Trichlorobenzene	24.4	1.0	ug/L	25.0	NA	97.6	75-125	NA	NA	
1,2,4-Trimethylbenzene	24.7	2.5	ug/L	25.0	NA	98.8	75-125	NA	NA	
1,2-Dibromo-3-chloropropane	22.4	10	ug/L	25.0	NA	89.6	75-125	NA	NA	
1,2-Dibromoethane	25.8	1.0	ug/L	25.0	NA	103	75-125	NA	NA	
1,2-Dichlorobenzene	25.9	1.0	ug/L	25.0	NA	104	75-125	NA	NA	
1,2-Dichloroethane	25.1	1.0	ug/L	25.0	NA	100	75-125	NA	NA	
1,2-Dichloropropane	25.8	1.0	ug/L	25.0	NA	103	75-125	NA	NA	
1,3,5-Trimethylbenzene	24.6	2.5	ug/L	25.0	NA	98.4	75-125	NA	NA	
1,3-Dichlorobenzene	25.1	1.0	ug/L	25.0	NA	100	75-125	NA	NA	
1,3-Dichloropropane	25.5	1.0	ug/L	25.0	NA	102	75-125	NA	NA	
1,4-Dichlorobenzene	24.5	1.0	ug/L	25.0	NA	98.0	75-125	NA	NA	
2,2-Dichloropropane	25.4	1.0	ug/L	25.0	NA	102	75-125	NA	NA	
2-Butanone (MEK)	23.4	10	ug/L	25.0	NA	93.6	80-140	NA	NA	
2-Chlorotoluene	24.2	2.5	ug/L	25.0	NA	96.8	75-125	NA	NA	
4-Chlorotoluene	24.5	2.5	ug/L	25.0	NA	98.0	75-125	NA	NA	
4-Isopropyltoluene	24.4	2.5	ug/L	25.0	NA	97.6	75-125	NA	NA	
Acetone	26.8	15	ug/L	25.0	NA	107	80-150	NA	NA	
Allyl Chloride	25.2	2.5	ug/L	25.0	NA	101	75-125	NA	NA	
Benzene	25.8	1.0	ug/L	25.0	NA	103	75-125	NA	NA	
Bromobenzene	25.0	1.0	ug/L	25.0	NA	100	75-125	NA	NA	
Bromochloromethane	26.0	1.0	ug/L	25.0	NA	104	75-125	NA	NA	
Bromodichloromethane	25.5	1.0	ug/L	25.0	NA	102	75-125	NA	NA	
Bromoform	24.4	5.0	ug/L	25.0	NA	97.6	75-125	NA	NA	
Bromomethane	24.2	1.0	ug/L	25.0	NA	96.8	70-130	NA	NA	
Carbon Tetrachloride	24.4	1.0	ug/L	25.0	NA	97.6	75-125	NA	NA	
Chlorobenzene	25.2	1.0	ug/L	25.0	NA	101	75-125	NA	NA	
Chlorodibromomethane	25.9	1.0	ug/L	25.0	NA	104	75-125	NA	NA	
Chloroethane	23.5	1.0	ug/L	25.0	NA	94.0	75-125	NA	NA	
Chloroform	25.4	1.0	ug/L	25.0	NA	102	75-125	NA	NA	



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
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Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0041 - EPA 5030B

Laboratory Control Sample (B8I0041-BS1)

Prepared & Analyzed: 09/02/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloromethane	23.5	1.0	ug/L	25.0	NA	94.0	75-125	NA	NA	
cis-1,2-Dichloroethene	26.2	1.0	ug/L	25.0	NA	105	75-125	NA	NA	
cis-1,3-Dichloropropene	24.0	1.0	ug/L	25.0	NA	96.0	75-125	NA	NA	
Dibromomethane	24.8	1.0	ug/L	25.0	NA	99.2	75-125	NA	NA	
Dichlorodifluoromethane	21.6	1.0	ug/L	25.0	NA	86.4	70-130	NA	NA	
Dichlorofluoromethane	23.4	1.0	ug/L	25.0	NA	93.6	75-125	NA	NA	
Ethyl Ether	23.8	1.0	ug/L	25.0	NA	95.2	75-125	NA	NA	
Ethylbenzene	26.3	2.5	ug/L	25.0	NA	105	75-125	NA	NA	
Hexachlorobutadiene	23.6	2.0	ug/L	25.0	NA	94.4	75-125	NA	NA	
Isopropylbenzene	25.0	2.5	ug/L	25.0	NA	100	75-125	NA	NA	
m,p-Xylenes	49.1	2.5	ug/L	50.0	NA	98.2	75-125	NA	NA	
Methyl Isobutyl Ketone	23.4	5.0	ug/L	25.0	NA	93.6	75-125	NA	NA	
Methylene chloride	23.5	5.0	ug/L	25.0	NA	94.0	75-125	NA	NA	
Methyl-t-butyl ether	26.7	10	ug/L	25.0	NA	107	75-125	NA	NA	
Naphthalene	25.3	2.5	ug/L	25.0	NA	101	75-125	NA	NA	
n-Butylbenzene	24.3	2.5	ug/L	25.0	NA	97.2	75-125	NA	NA	
n-Propylbenzene	23.4	10	ug/L	25.0	NA	93.6	75-125	NA	NA	
o-Xylene	24.7	2.5	ug/L	25.0	NA	98.8	75-125	NA	NA	
sec-Butylbenzene	24.4	2.5	ug/L	25.0	NA	97.6	75-125	NA	NA	
Styrene	23.7	10	ug/L	25.0	NA	94.8	75-125	NA	NA	
tert-Butylbenzene	24.2	10	ug/L	25.0	NA	96.8	75-125	NA	NA	
Tetrachloroethene	24.9	2.0	ug/L	25.0	NA	99.6	75-125	NA	NA	
Tetrahydrofuran	23.1	5.0	ug/L	25.0	NA	92.4	75-125	NA	NA	
Toluene	25.4	1.0	ug/L	25.0	NA	102	75-125	NA	NA	
trans-1,2-Dichloroethene	25.5	1.0	ug/L	25.0	NA	102	75-125	NA	NA	
trans-1,3-Dichloropropene	24.0	1.0	ug/L	25.0	NA	96.0	75-125	NA	NA	
Trichloroethene	25.1	1.0	ug/L	25.0	NA	100	75-125	NA	NA	
Trichlorofluoromethane	22.4	1.0	ug/L	25.0	NA	89.6	75-125	NA	NA	
Vinyl chloride	21.5	2.5	ug/L	25.0	NA	86.0	70-130	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	24.2		ug/L	25.0	NA	96.8	80-120			
Surrogate: 4-Bromofluorobenzene	25.5		ug/L	25.0	NA	102	80-120			
Surrogate: Dibromofluoromethane	25.0		ug/L	25.0	NA	100	80-120			
Surrogate: Toluene-d8	24.8		ug/L	25.0	NA	99.2	80-120			



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Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0041 - EPA 5030B

Laboratory Control Sample Duplicate (B8I0041-BSD1)

Prepared & Analyzed: 09/02/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	24.9	1.0	ug/L	25.0	NA	99.6	75-125	1.20	20	
1,1,1-Trichloroethane	24.5	1.0	ug/L	25.0	NA	98.0	75-125	1.22	20	
1,1,2,2-Tetrachloroethane	24.8	1.0	ug/L	25.0	NA	99.2	75-125	0.404	20	
1,1,2-Trichloroethane	25.0	1.0	ug/L	25.0	NA	100	75-125	1.98	20	
1,1,2-Trichlorotrifluoroethane	23.6	1.0	ug/L	25.0	NA	94.4	75-125	1.68	20	
1,1-Dichloroethane	25.3	1.0	ug/L	25.0	NA	101	75-125	0.396	20	
1,1-Dichloroethene	24.3	1.0	ug/L	25.0	NA	97.2	75-125	2.04	20	
1,1-Dichloropropene	23.2	2.5	ug/L	25.0	NA	92.8	75-125	0.858	20	
1,2,3-Trichlorobenzene	22.4	1.0	ug/L	25.0	NA	89.6	75-125	10.6	20	
1,2,3-Trichloropropane	24.8	1.0	ug/L	25.0	NA	99.2	75-125	2.78	20	
1,2,4-Trichlorobenzene	23.3	1.0	ug/L	25.0	NA	93.2	75-125	4.61	20	
1,2,4-Trimethylbenzene	24.8	2.5	ug/L	25.0	NA	99.2	75-125	0.404	20	
1,2-Dibromo-3-chloropropane	21.3	10	ug/L	25.0	NA	85.2	75-125	5.03	20	
1,2-Dibromoethane	25.0	1.0	ug/L	25.0	NA	100	75-125	3.15	20	
1,2-Dichlorobenzene	25.9	1.0	ug/L	25.0	NA	104	75-125	0.00	20	
1,2-Dichloroethane	24.9	1.0	ug/L	25.0	NA	99.6	75-125	0.800	20	
1,2-Dichloropropane	26.3	1.0	ug/L	25.0	NA	105	75-125	1.92	20	
1,3,5-Trimethylbenzene	24.6	2.5	ug/L	25.0	NA	98.4	75-125	0.00	20	
1,3-Dichlorobenzene	25.1	1.0	ug/L	25.0	NA	100	75-125	0.00	20	
1,3-Dichloropropane	25.5	1.0	ug/L	25.0	NA	102	75-125	0.00	20	
1,4-Dichlorobenzene	24.4	1.0	ug/L	25.0	NA	97.6	75-125	0.409	20	
2,2-Dichloropropane	25.6	1.0	ug/L	25.0	NA	102	75-125	0.784	20	
2-Butanone (MEK)	22.1	10	ug/L	25.0	NA	88.4	80-140	5.71	20	
2-Chlorotoluene	24.4	2.5	ug/L	25.0	NA	97.6	75-125	0.823	20	
4-Chlorotoluene	24.5	2.5	ug/L	25.0	NA	98.0	75-125	0.00	20	
4-Isopropyltoluene	24.6	2.5	ug/L	25.0	NA	98.4	75-125	0.816	20	
Acetone	25.0	15	ug/L	25.0	NA	100	80-150	6.95	20	
Allyl Chloride	24.7	2.5	ug/L	25.0	NA	98.8	75-125	2.00	20	
Benzene	26.1	1.0	ug/L	25.0	NA	104	75-125	1.16	20	
Bromobenzene	24.8	1.0	ug/L	25.0	NA	99.2	75-125	0.803	20	
Bromochloromethane	25.5	1.0	ug/L	25.0	NA	102	75-125	1.94	20	
Bromodichloromethane	25.9	1.0	ug/L	25.0	NA	104	75-125	1.56	20	
Bromoform	23.7	5.0	ug/L	25.0	NA	94.8	75-125	2.91	20	
Bromomethane	22.8	1.0	ug/L	25.0	NA	91.2	70-130	5.96	20	
Carbon Tetrachloride	24.4	1.0	ug/L	25.0	NA	97.6	75-125	0.00	20	
Chlorobenzene	25.1	1.0	ug/L	25.0	NA	100	75-125	0.398	20	
Chlorodibromomethane	25.2	1.0	ug/L	25.0	NA	101	75-125	2.74	20	
Chloroethane	23.4	1.0	ug/L	25.0	NA	93.6	75-125	0.426	20	
Chloroform	25.3	1.0	ug/L	25.0	NA	101	75-125	0.394	20	



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0041 - EPA 5030B

Laboratory Control Sample Duplicate (B8I0041-BSD1)

Prepared & Analyzed: 09/02/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloromethane	22.9	1.0	ug/L	25.0	NA	91.6	75-125	2.59	20	
cis-1,2-Dichloroethene	26.2	1.0	ug/L	25.0	NA	105	75-125	0.00	20	
cis-1,3-Dichloropropene	24.1	1.0	ug/L	25.0	NA	96.4	75-125	0.416	20	
Dibromomethane	24.6	1.0	ug/L	25.0	NA	98.4	75-125	0.810	20	
Dichlorodifluoromethane	20.4	1.0	ug/L	25.0	NA	81.6	70-130	5.71	20	
Dichlorofluoromethane	23.6	1.0	ug/L	25.0	NA	94.4	75-125	0.851	20	
Ethyl Ether	23.2	1.0	ug/L	25.0	NA	92.8	75-125	2.55	20	
Ethylbenzene	26.1	2.5	ug/L	25.0	NA	104	75-125	0.763	20	
Hexachlorobutadiene	23.0	2.0	ug/L	25.0	NA	92.0	75-125	2.58	20	
Isopropylbenzene	24.9	2.5	ug/L	25.0	NA	99.6	75-125	0.401	20	
m,p-Xylenes	49.0	2.5	ug/L	50.0	NA	98.0	75-125	0.204	20	
Methyl Isobutyl Ketone	23.0	5.0	ug/L	25.0	NA	92.0	75-125	1.72	20	
Methylene chloride	23.5	5.0	ug/L	25.0	NA	94.0	75-125	0.00	20	
Methyl-t-butyl ether	25.6	10	ug/L	25.0	NA	102	75-125	4.21	20	
Naphthalene	23.2	2.5	ug/L	25.0	NA	92.8	75-125	8.66	20	
n-Butylbenzene	24.7	2.5	ug/L	25.0	NA	98.8	75-125	1.63	20	
n-Propylbenzene	23.2	10	ug/L	25.0	NA	92.8	75-125	0.858	20	
o-Xylene	24.6	2.5	ug/L	25.0	NA	98.4	75-125	0.406	20	
sec-Butylbenzene	24.5	2.5	ug/L	25.0	NA	98.0	75-125	0.409	20	
Styrene	23.5	10	ug/L	25.0	NA	94.0	75-125	0.847	20	
tert-Butylbenzene	24.5	10	ug/L	25.0	NA	98.0	75-125	1.23	20	
Tetrachloroethene	24.2	2.0	ug/L	25.0	NA	96.8	75-125	2.85	20	
Tetrahydrofuran	20.8	5.0	ug/L	25.0	NA	83.2	75-125	10.5	20	
Toluene	25.2	1.0	ug/L	25.0	NA	101	75-125	0.791	20	
trans-1,2-Dichloroethene	25.5	1.0	ug/L	25.0	NA	102	75-125	0.00	20	
trans-1,3-Dichloropropene	23.9	1.0	ug/L	25.0	NA	95.6	75-125	0.418	20	
Trichloroethene	25.2	1.0	ug/L	25.0	NA	101	75-125	0.398	20	
Trichlorofluoromethane	22.8	1.0	ug/L	25.0	NA	91.2	75-125	1.77	20	
Vinyl chloride	21.0	2.5	ug/L	25.0	NA	84.0	70-130	2.35	20	
Surrogate: 1,2-Dichloroethane-d4	24.4		ug/L	25.0	NA	97.6	80-120			
Surrogate: 4-Bromo fluoro benzene	25.5		ug/L	25.0	NA	102	80-120			
Surrogate: Dibromo fluoro methane	25.2		ug/L	25.0	NA	101	80-120			
Surrogate: Toluene-d8	24.6		ug/L	25.0	NA	98.4	80-120			

Braun Intertec-St Cloud
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 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0041 - EPA 5030B

Matrix Spike (B8I0041-MS1)

Source: 0805150-02

Prepared & Analyzed: 09/02/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	25.6	1.0	ug/L	25.0	ND	102	75-125	NA	NA	
1,1,1-Trichloroethane	25.2	1.0	ug/L	25.0	ND	101	75-125	NA	NA	
1,1,2,2-Tetrachloroethane	24.8	1.0	ug/L	25.0	ND	99.2	75-125	NA	NA	
1,1,2-Trichloroethane	25.5	1.0	ug/L	25.0	ND	102	75-125	NA	NA	
1,1,2-Trichlorotrifluoroethane	24.0	1.0	ug/L	25.0	ND	96.0	75-125	NA	NA	
1,1-Dichloroethane	25.9	1.0	ug/L	25.0	ND	104	75-125	NA	NA	
1,1-Dichloroethene	25.1	1.0	ug/L	25.0	ND	100	75-125	NA	NA	
1,1-Dichloropropene	23.7	2.5	ug/L	25.0	ND	94.8	75-125	NA	NA	
1,2,3-Trichlorobenzene	26.1	1.0	ug/L	25.0	ND	104	75-125	NA	NA	
1,2,3-Trichloropropane	25.4	1.0	ug/L	25.0	ND	102	75-125	NA	NA	
1,2,4-Trichlorobenzene	25.2	1.0	ug/L	25.0	ND	101	75-125	NA	NA	
1,2,4-Trimethylbenzene	25.6	2.5	ug/L	25.0	ND	102	75-125	NA	NA	
1,2-Dibromo-3-chloropropane	22.8	10	ug/L	25.0	ND	91.2	75-125	NA	NA	
1,2-Dibromoethane	25.8	1.0	ug/L	25.0	ND	103	75-125	NA	NA	
1,2-Dichlorobenzene	27.0	1.0	ug/L	25.0	ND	108	75-125	NA	NA	
1,2-Dichloroethane	25.5	1.0	ug/L	25.0	ND	102	75-125	NA	NA	
1,2-Dichloropropane	26.6	1.0	ug/L	25.0	ND	106	75-125	NA	NA	
1,3,5-Trimethylbenzene	25.3	2.5	ug/L	25.0	ND	101	75-125	NA	NA	
1,3-Dichlorobenzene	26.1	1.0	ug/L	25.0	ND	104	75-125	NA	NA	
1,3-Dichloropropane	26.0	1.0	ug/L	25.0	ND	104	75-125	NA	NA	
1,4-Dichlorobenzene	25.2	1.0	ug/L	25.0	ND	101	75-125	NA	NA	
2,2-Dichloropropane	26.2	1.0	ug/L	25.0	ND	105	75-125	NA	NA	
2-Butanone (MEK)	23.3	10	ug/L	25.0	ND	93.2	75-140	NA	NA	
2-Chlorotoluene	25.0	2.5	ug/L	25.0	ND	100	75-125	NA	NA	
4-Chlorotoluene	25.0	2.5	ug/L	25.0	ND	100	75-125	NA	NA	
4-Isopropyltoluene	25.1	2.5	ug/L	25.0	ND	100	75-125	NA	NA	
Acetone	24.4	15	ug/L	25.0	ND	97.6	75-150	NA	NA	
Allyl Chloride	26.1	2.5	ug/L	25.0	ND	104	75-125	NA	NA	
Benzene	26.6	1.0	ug/L	25.0	ND	106	75-125	NA	NA	
Bromobenzene	25.7	1.0	ug/L	25.0	ND	103	75-125	NA	NA	
Bromochloromethane	26.4	1.0	ug/L	25.0	ND	106	75-125	NA	NA	
Bromodichloromethane	26.3	1.0	ug/L	25.0	ND	105	75-125	NA	NA	
Bromoform	24.8	5.0	ug/L	25.0	ND	99.2	75-125	NA	NA	
Bromomethane	24.6	1.0	ug/L	25.0	ND	98.4	70-130	NA	NA	
Carbon Tetrachloride	24.9	1.0	ug/L	25.0	ND	99.6	75-125	NA	NA	
Chlorobenzene	25.7	1.0	ug/L	25.0	ND	103	75-125	NA	NA	
Chlorodibromomethane	26.0	1.0	ug/L	25.0	ND	104	75-125	NA	NA	
Chloroethane	23.6	1.0	ug/L	25.0	ND	94.4	75-125	NA	NA	
Chloroform	26.0	1.0	ug/L	25.0	ND	104	75-125	NA	NA	



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1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0041 - EPA 5030B

Matrix Spike (B8I0041-MS1)

Source: 0805150-02

Prepared & Analyzed: 09/02/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloromethane	23.6	1.0	ug/L	25.0	ND	94.4	75-125	NA	NA	
cis-1,2-Dichloroethene	27.0	1.0	ug/L	25.0	ND	108	75-125	NA	NA	
cis-1,3-Dichloropropene	24.7	1.0	ug/L	25.0	ND	98.8	75-125	NA	NA	
Dibromomethane	25.8	1.0	ug/L	25.0	ND	103	75-125	NA	NA	
Dichlorodifluoromethane	21.4	1.0	ug/L	25.0	ND	85.6	70-130	NA	NA	
Dichlorofluoromethane	23.7	1.0	ug/L	25.0	ND	94.8	75-125	NA	NA	
Ethyl Ether	24.1	1.0	ug/L	25.0	ND	96.4	75-125	NA	NA	
Ethylbenzene	27.0	2.5	ug/L	25.0	ND	108	75-125	NA	NA	
Hexachlorobutadiene	24.8	2.0	ug/L	25.0	ND	99.2	75-125	NA	NA	
Isopropylbenzene	25.4	2.5	ug/L	25.0	ND	102	75-125	NA	NA	
m,p-Xylenes	50.2	2.5	ug/L	50.0	ND	100	75-125	NA	NA	
Methyl Isobutyl Ketone	23.2	5.0	ug/L	25.0	ND	92.8	75-125	NA	NA	
Methylene chloride	24.0	5.0	ug/L	25.0	ND	96.0	75-125	NA	NA	
Methyl-t-butyl ether	27.1	10	ug/L	25.0	ND	108	75-125	NA	NA	
Naphthalene	26.0	2.5	ug/L	25.0	ND	104	75-125	NA	NA	
n-Butylbenzene	25.3	2.5	ug/L	25.0	ND	101	75-125	NA	NA	
n-Propylbenzene	23.7	10	ug/L	25.0	ND	94.8	75-125	NA	NA	
o-Xylene	25.1	2.5	ug/L	25.0	ND	100	75-125	NA	NA	
sec-Butylbenzene	25.1	2.5	ug/L	25.0	ND	100	75-125	NA	NA	
Styrene	24.2	10	ug/L	25.0	ND	96.8	75-125	NA	NA	
tert-Butylbenzene	25.0	10	ug/L	25.0	ND	100	75-125	NA	NA	
Tetrachloroethene	25.3	2.0	ug/L	25.0	ND	101	75-125	NA	NA	
Tetrahydrofuran	22.6	5.0	ug/L	25.0	ND	90.4	75-125	NA	NA	
Toluene	26.0	1.0	ug/L	25.0	ND	104	75-125	NA	NA	
trans-1,2-Dichloroethene	26.4	1.0	ug/L	25.0	ND	106	75-125	NA	NA	
trans-1,3-Dichloropropene	24.4	1.0	ug/L	25.0	ND	97.6	75-125	NA	NA	
Trichloroethene	25.7	1.0	ug/L	25.0	ND	103	75-125	NA	NA	
Trichlorofluoromethane	22.4	1.0	ug/L	25.0	ND	89.6	75-125	NA	NA	
Vinyl chloride	21.1	2.5	ug/L	25.0	ND	84.4	70-130	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	24.2		ug/L	25.0	NA	96.8	80-120			
Surrogate: 4-Bromo fluoro benzene	25.7		ug/L	25.0	NA	103	80-120			
Surrogate: Dibromo fluoro methane	25.4		ug/L	25.0	NA	102	80-120			
Surrogate: Toluene-d8	24.7		ug/L	25.0	NA	98.8	80-120			

Braun Intertec-St Cloud
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Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0041 - EPA 5030B

Matrix Spike Duplicate (B8I0041-MSD1)

Source: 0805150-02

Prepared & Analyzed: 09/02/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	25.3	1.0	ug/L	25.0	ND	101	75-125	1.18	20	
1,1,1-Trichloroethane	24.6	1.0	ug/L	25.0	ND	98.4	75-125	2.41	20	
1,1,2,2-Tetrachloroethane	25.2	1.0	ug/L	25.0	ND	101	75-125	1.60	20	
1,1,2-Trichloroethane	25.4	1.0	ug/L	25.0	ND	102	75-125	0.393	20	
1,1,2-Trichlorotrifluoroethane	23.6	1.0	ug/L	25.0	ND	94.4	75-125	1.68	20	
1,1-Dichloroethane	25.5	1.0	ug/L	25.0	ND	102	75-125	1.56	20	
1,1-Dichloroethene	24.6	1.0	ug/L	25.0	ND	98.4	75-125	2.01	20	
1,1-Dichloropropene	23.2	2.5	ug/L	25.0	ND	92.8	75-125	2.13	20	
1,2,3-Trichlorobenzene	25.6	1.0	ug/L	25.0	ND	102	75-125	1.93	20	
1,2,3-Trichloropropane	25.8	1.0	ug/L	25.0	ND	103	75-125	1.56	20	
1,2,4-Trichlorobenzene	24.3	1.0	ug/L	25.0	ND	97.2	75-125	3.64	20	
1,2,4-Trimethylbenzene	24.8	2.5	ug/L	25.0	ND	99.2	75-125	3.17	20	
1,2-Dibromo-3-chloropropane	23.0	10	ug/L	25.0	ND	92.0	75-125	0.873	20	
1,2-Dibromoethane	25.8	1.0	ug/L	25.0	ND	103	75-125	0.00	20	
1,2-Dichlorobenzene	26.4	1.0	ug/L	25.0	ND	106	75-125	2.25	20	
1,2-Dichloroethane	24.8	1.0	ug/L	25.0	ND	99.2	75-125	2.78	20	
1,2-Dichloropropane	25.9	1.0	ug/L	25.0	ND	104	75-125	2.67	20	
1,3,5-Trimethylbenzene	24.6	2.5	ug/L	25.0	ND	98.4	75-125	2.81	20	
1,3-Dichlorobenzene	25.5	1.0	ug/L	25.0	ND	102	75-125	2.33	20	
1,3-Dichloropropane	25.6	1.0	ug/L	25.0	ND	102	75-125	1.55	20	
1,4-Dichlorobenzene	24.8	1.0	ug/L	25.0	ND	99.2	75-125	1.60	20	
2,2-Dichloropropane	25.5	1.0	ug/L	25.0	ND	102	75-125	2.71	20	
2-Butanone (MEK)	22.2	10	ug/L	25.0	ND	88.8	75-140	4.84	20	
2-Chlorotoluene	24.4	2.5	ug/L	25.0	ND	97.6	75-125	2.43	20	
4-Chlorotoluene	24.6	2.5	ug/L	25.0	ND	98.4	75-125	1.61	20	
4-Isopropyltoluene	24.2	2.5	ug/L	25.0	ND	96.8	75-125	3.65	20	
Acetone	24.5	15	ug/L	25.0	ND	98.0	75-150	0.409	20	
Allyl Chloride	25.7	2.5	ug/L	25.0	ND	103	75-125	1.54	20	
Benzene	25.9	1.0	ug/L	25.0	ND	104	75-125	2.67	20	
Bromobenzene	25.2	1.0	ug/L	25.0	ND	101	75-125	1.96	20	
Bromochloromethane	26.2	1.0	ug/L	25.0	ND	105	75-125	0.760	20	
Bromodichloromethane	25.6	1.0	ug/L	25.0	ND	102	75-125	2.70	20	
Bromoform	24.9	5.0	ug/L	25.0	ND	99.6	75-125	0.402	20	
Bromomethane	24.0	1.0	ug/L	25.0	ND	96.0	70-130	2.47	20	
Carbon Tetrachloride	24.4	1.0	ug/L	25.0	ND	97.6	75-125	2.03	20	
Chlorobenzene	25.3	1.0	ug/L	25.0	ND	101	75-125	1.57	20	
Chlorodibromomethane	25.8	1.0	ug/L	25.0	ND	103	75-125	0.772	20	
Chloroethane	22.6	1.0	ug/L	25.0	ND	90.4	75-125	4.33	20	
Chloroform	25.5	1.0	ug/L	25.0	ND	102	75-125	1.94	20	



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Volatile Organic Compounds - Quality Control

Batch B8I0041 - EPA 5030B

Matrix Spike Duplicate (B8I0041-MSD1)

Source: 0805150-02

Prepared & Analyzed: 09/02/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloromethane	22.5	1.0	ug/L	25.0	ND	90.0	75-125	4.77	20	
cis-1,2-Dichloroethene	26.2	1.0	ug/L	25.0	ND	105	75-125	3.01	20	
cis-1,3-Dichloropropene	24.1	1.0	ug/L	25.0	ND	96.4	75-125	2.46	20	
Dibromomethane	25.0	1.0	ug/L	25.0	ND	100	75-125	3.15	20	
Dichlorodifluoromethane	20.8	1.0	ug/L	25.0	ND	83.2	70-130	2.84	20	
Dichlorofluoromethane	23.0	1.0	ug/L	25.0	ND	92.0	75-125	3.00	20	
Ethyl Ether	23.3	1.0	ug/L	25.0	ND	93.2	75-125	3.38	20	
Ethylbenzene	26.4	2.5	ug/L	25.0	ND	106	75-125	2.25	20	
Hexachlorobutadiene	24.1	2.0	ug/L	25.0	ND	96.4	75-125	2.86	20	
Isopropylbenzene	25.0	2.5	ug/L	25.0	ND	100	75-125	1.59	20	
m,p-Xylenes	49.3	2.5	ug/L	50.0	ND	98.6	75-125	1.81	20	
Methyl Isobutyl Ketone	22.8	5.0	ug/L	25.0	ND	91.2	75-125	1.74	20	
Methylene chloride	23.5	5.0	ug/L	25.0	ND	94.0	75-125	2.11	20	
Methyl-t-butyl ether	26.9	10	ug/L	25.0	ND	108	75-125	0.741	20	
Naphthalene	25.6	2.5	ug/L	25.0	ND	102	75-125	1.55	20	
n-Butylbenzene	24.3	2.5	ug/L	25.0	ND	97.2	75-125	4.03	20	
n-Propylbenzene	23.1	10	ug/L	25.0	ND	92.4	75-125	2.56	20	
o-Xylene	24.8	2.5	ug/L	25.0	ND	99.2	75-125	1.20	20	
sec-Butylbenzene	24.2	2.5	ug/L	25.0	ND	96.8	75-125	3.65	20	
Styrene	23.9	10	ug/L	25.0	ND	95.6	75-125	1.25	20	
tert-Butylbenzene	24.3	10	ug/L	25.0	ND	97.2	75-125	2.84	20	
Tetrachloroethene	25.1	2.0	ug/L	25.0	ND	100	75-125	0.794	20	
Tetrahydrofuran	22.6	5.0	ug/L	25.0	ND	90.4	75-125	0.00	20	
Toluene	25.6	1.0	ug/L	25.0	ND	102	75-125	1.55	20	
trans-1,2-Dichloroethene	25.8	1.0	ug/L	25.0	ND	103	75-125	2.30	20	
trans-1,3-Dichloropropene	23.9	1.0	ug/L	25.0	ND	95.6	75-125	2.07	20	
Trichloroethene	25.1	1.0	ug/L	25.0	ND	100	75-125	2.36	20	
Trichlorofluoromethane	21.9	1.0	ug/L	25.0	ND	87.6	75-125	2.26	20	
Vinyl chloride	21.0	2.5	ug/L	25.0	ND	84.0	70-130	0.475	20	
Surrogate: 1,2-Dichloroethane-d4	24.2		ug/L	25.0	NA	96.8	80-120			
Surrogate: 4-Bromoiodobenzene	26.0		ug/L	25.0	NA	104	80-120			
Surrogate: Dibromoiodomethane	25.2		ug/L	25.0	NA	101	80-120			
Surrogate: Toluene-d8	25.0		ug/L	25.0	NA	100	80-120			



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0042 - EPA 5030B

Method Blank (B8I0042-BLK1)

Prepared & Analyzed: 09/03/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1,1-Trichloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1,2-Trichloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1,2-Trichlorotrifluoroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,1-Dichloropropene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
1,2,3-Trichlorobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,2,3-Trichloropropane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,2,4-Trichlorobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,2,4-Trimethylbenzene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
1,2-Dibromo-3-chloropropane	< 10	10	ug/L	NA	NA	NA	NA	NA	NA	
1,2-Dibromoethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,2-Dichlorobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,2-Dichloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,2-Dichloropropane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,3,5-Trimethylbenzene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
1,3-Dichlorobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,3-Dichloropropane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
1,4-Dichlorobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
2,2-Dichloropropane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
2-Butanone (MEK)	< 10	10	ug/L	NA	NA	NA	NA	NA	NA	
2-Chlorotoluene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
4-Chlorotoluene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
4-Isopropyltoluene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
Acetone	< 15	15	ug/L	NA	NA	NA	NA	NA	NA	
Allyl Chloride	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	
Benzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Bromobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Bromochloromethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Bromodichloromethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Bromoform	< 5.0	5.0	ug/L	NA	NA	NA	NA	NA	NA	
Bromomethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Carbon Tetrachloride	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Chlorobenzene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Chlorodibromomethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Chloroethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	
Chloroform	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	



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Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0042 - EPA 5030B

Method Blank (B8I0042-BLK1)

Prepared & Analyzed: 09/03/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloromethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Dibromomethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Dichlorofluoromethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Ethyl Ether	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	< 2.0	2.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
m,p-Xylenes	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
Methyl Isobutyl Ketone	< 5.0	5.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	< 5.0	5.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Methyl-t-butyl ether	< 10	10	ug/L	NA	NA	NA	NA	NA	NA	NA
Naphthalene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	< 10	10	ug/L	NA	NA	NA	NA	NA	NA	NA
o-Xylene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
Styrene	< 10	10	ug/L	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	< 10	10	ug/L	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	< 2.0	2.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Tetrahydrofuran	< 5.0	5.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Toluene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	< 1.0	1.0	ug/L	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	< 2.5	2.5	ug/L	NA	NA	NA	NA	NA	NA	NA
<i>Surrogate: 1,2-Dichloroethane-d4</i>	26.9		ug/L	25.0	NA	108	80-120			
<i>Surrogate: 4-Bromo fluoro benzene</i>	22.7		ug/L	25.0	NA	90.8	80-120			
<i>Surrogate: Dibromo fluoro methane</i>	24.7		ug/L	25.0	NA	98.8	80-120			
<i>Surrogate: Toluene-d8</i>	25.4		ug/L	25.0	NA	102	80-120			



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Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0042 - EPA 5030B

Laboratory Control Sample (B8I0042-BS1)

Prepared & Analyzed: 09/03/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	25.1	1.0	ug/L	25.0	NA	100	75-125	NA	NA	
1,1,1-Trichloroethane	24.4	1.0	ug/L	25.0	NA	97.6	75-125	NA	NA	
1,1,2,2-Tetrachloroethane	25.2	1.0	ug/L	25.0	NA	101	75-125	NA	NA	
1,1,2-Trichloroethane	25.4	1.0	ug/L	25.0	NA	102	75-125	NA	NA	
1,1,2-Trichlorotrifluoroethane	22.4	1.0	ug/L	25.0	NA	89.6	75-125	NA	NA	
1,1-Dichloroethane	25.4	1.0	ug/L	25.0	NA	102	75-125	NA	NA	
1,1-Dichloroethene	23.6	1.0	ug/L	25.0	NA	94.4	75-125	NA	NA	
1,1-Dichloropropene	22.8	2.5	ug/L	25.0	NA	91.2	75-125	NA	NA	
1,2,3-Trichlorobenzene	25.7	1.0	ug/L	25.0	NA	103	75-125	NA	NA	
1,2,3-Trichloropropane	25.7	1.0	ug/L	25.0	NA	103	75-125	NA	NA	
1,2,4-Trichlorobenzene	24.8	1.0	ug/L	25.0	NA	99.2	75-125	NA	NA	
1,2,4-Trimethylbenzene	25.5	2.5	ug/L	25.0	NA	102	75-125	NA	NA	
1,2-Dibromo-3-chloropropane	22.7	10	ug/L	25.0	NA	90.8	75-125	NA	NA	
1,2-Dibromoethane	25.0	1.0	ug/L	25.0	NA	100	75-125	NA	NA	
1,2-Dichlorobenzene	27.0	1.0	ug/L	25.0	NA	108	75-125	NA	NA	
1,2-Dichloroethane	25.7	1.0	ug/L	25.0	NA	103	75-125	NA	NA	
1,2-Dichloropropane	26.4	1.0	ug/L	25.0	NA	106	75-125	NA	NA	
1,3,5-Trimethylbenzene	25.2	2.5	ug/L	25.0	NA	101	75-125	NA	NA	
1,3-Dichlorobenzene	25.8	1.0	ug/L	25.0	NA	103	75-125	NA	NA	
1,3-Dichloropropane	25.6	1.0	ug/L	25.0	NA	102	75-125	NA	NA	
1,4-Dichlorobenzene	25.0	1.0	ug/L	25.0	NA	100	75-125	NA	NA	
2,2-Dichloropropane	25.4	1.0	ug/L	25.0	NA	102	75-125	NA	NA	
2-Butanone (MEK)	21.8	10	ug/L	25.0	NA	87.2	80-140	NA	NA	
2-Chlorotoluene	25.3	2.5	ug/L	25.0	NA	101	75-125	NA	NA	
4-Chlorotoluene	25.0	2.5	ug/L	25.0	NA	100	75-125	NA	NA	
4-Isopropyltoluene	24.7	2.5	ug/L	25.0	NA	98.8	75-125	NA	NA	
Acetone	24.8	15	ug/L	25.0	NA	99.2	80-150	NA	NA	
Allyl Chloride	24.5	2.5	ug/L	25.0	NA	98.0	75-125	NA	NA	
Benzene	26.2	1.0	ug/L	25.0	NA	105	75-125	NA	NA	
Bromobenzene	25.3	1.0	ug/L	25.0	NA	101	75-125	NA	NA	
Bromochloromethane	25.0	1.0	ug/L	25.0	NA	100	75-125	NA	NA	
Bromodichloromethane	26.4	1.0	ug/L	25.0	NA	106	75-125	NA	NA	
Bromoform	24.2	5.0	ug/L	25.0	NA	96.8	75-125	NA	NA	
Bromomethane	24.5	1.0	ug/L	25.0	NA	98.0	70-130	NA	NA	
Carbon Tetrachloride	24.9	1.0	ug/L	25.0	NA	99.6	75-125	NA	NA	
Chlorobenzene	24.9	1.0	ug/L	25.0	NA	99.6	75-125	NA	NA	
Chlorodibromomethane	25.8	1.0	ug/L	25.0	NA	103	75-125	NA	NA	
Chloroethane	24.9	1.0	ug/L	25.0	NA	99.6	75-125	NA	NA	
Chloroform	25.3	1.0	ug/L	25.0	NA	101	75-125	NA	NA	



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
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Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0042 - EPA 5030B

Laboratory Control Sample (B8I0042-BS1)

Prepared & Analyzed: 09/03/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloromethane	23.9	1.0	ug/L	25.0	NA	95.6	75-125	NA	NA	
cis-1,2-Dichloroethene	25.7	1.0	ug/L	25.0	NA	103	75-125	NA	NA	
cis-1,3-Dichloropropene	24.5	1.0	ug/L	25.0	NA	98.0	75-125	NA	NA	
Dibromomethane	26.2	1.0	ug/L	25.0	NA	105	75-125	NA	NA	
Dichlorodifluoromethane	20.2	1.0	ug/L	25.0	NA	80.8	70-130	NA	NA	
Dichlorofluoromethane	25.1	1.0	ug/L	25.0	NA	100	75-125	NA	NA	
Ethyl Ether	25.7	1.0	ug/L	25.0	NA	103	75-125	NA	NA	
Ethylbenzene	26.0	2.5	ug/L	25.0	NA	104	75-125	NA	NA	
Hexachlorobutadiene	24.6	2.0	ug/L	25.0	NA	98.4	75-125	NA	NA	
Isopropylbenzene	24.5	2.5	ug/L	25.0	NA	98.0	75-125	NA	NA	
m,p-Xylenes	48.5	2.5	ug/L	50.0	NA	97.0	75-125	NA	NA	
Methyl Isobutyl Ketone	24.0	5.0	ug/L	25.0	NA	96.0	75-125	NA	NA	
Methylene chloride	22.8	5.0	ug/L	25.0	NA	91.2	75-125	NA	NA	
Methyl-t-butyl ether	26.5	10	ug/L	25.0	NA	106	75-125	NA	NA	
Naphthalene	26.1	2.5	ug/L	25.0	NA	104	75-125	NA	NA	
n-Butylbenzene	25.2	2.5	ug/L	25.0	NA	101	75-125	NA	NA	
n-Propylbenzene	23.4	10	ug/L	25.0	NA	93.6	75-125	NA	NA	
o-Xylene	24.5	2.5	ug/L	25.0	NA	98.0	75-125	NA	NA	
sec-Butylbenzene	24.8	2.5	ug/L	25.0	NA	99.2	75-125	NA	NA	
Styrene	23.5	10	ug/L	25.0	NA	94.0	75-125	NA	NA	
tert-Butylbenzene	24.5	10	ug/L	25.0	NA	98.0	75-125	NA	NA	
Tetrachloroethene	23.8	2.0	ug/L	25.0	NA	95.2	75-125	NA	NA	
Tetrahydrofuran	22.1	5.0	ug/L	25.0	NA	88.4	75-125	NA	NA	
Toluene	25.1	1.0	ug/L	25.0	NA	100	75-125	NA	NA	
trans-1,2-Dichloroethene	24.9	1.0	ug/L	25.0	NA	99.6	75-125	NA	NA	
trans-1,3-Dichloropropene	24.4	1.0	ug/L	25.0	NA	97.6	75-125	NA	NA	
Trichloroethene	25.1	1.0	ug/L	25.0	NA	100	75-125	NA	NA	
Trichlorofluoromethane	23.7	1.0	ug/L	25.0	NA	94.8	75-125	NA	NA	
Vinyl chloride	24.6	2.5	ug/L	25.0	NA	98.4	70-130	NA	NA	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	24.7		ug/L	25.0	NA	98.8	80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.8		ug/L	25.0	NA	99.2	80-120			
<i>Surrogate: Dibromofluoromethane</i>	24.8		ug/L	25.0	NA	99.2	80-120			
<i>Surrogate: Toluene-d8</i>	24.3		ug/L	25.0	NA	97.2	80-120			



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Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0042 - EPA 5030B

Laboratory Control Sample Duplicate (B8I0042-BSD1)

Prepared & Analyzed: 09/03/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	25.2	1.0	ug/L	25.0	NA	101	75-125	0.398	20	
1,1,1-Trichloroethane	24.7	1.0	ug/L	25.0	NA	98.8	75-125	1.22	20	
1,1,2,2-Tetrachloroethane	24.8	1.0	ug/L	25.0	NA	99.2	75-125	1.60	20	
1,1,2-Trichloroethane	25.2	1.0	ug/L	25.0	NA	101	75-125	0.791	20	
1,1,2-Trichlorotrifluoroethane	22.6	1.0	ug/L	25.0	NA	90.4	75-125	0.889	20	
1,1-Dichloroethane	25.2	1.0	ug/L	25.0	NA	101	75-125	0.791	20	
1,1-Dichloroethene	23.6	1.0	ug/L	25.0	NA	94.4	75-125	0.00	20	
1,1-Dichloropropene	22.5	2.5	ug/L	25.0	NA	90.0	75-125	1.32	20	
1,2,3-Trichlorobenzene	22.6	1.0	ug/L	25.0	NA	90.4	75-125	12.8	20	
1,2,3-Trichloropropane	24.5	1.0	ug/L	25.0	NA	98.0	75-125	4.78	20	
1,2,4-Trichlorobenzene	23.2	1.0	ug/L	25.0	NA	92.8	75-125	6.67	20	
1,2,4-Trimethylbenzene	25.3	2.5	ug/L	25.0	NA	101	75-125	0.787	20	
1,2-Dibromo-3-chloropropane	20.5	10	ug/L	25.0	NA	82.0	75-125	10.2	20	
1,2-Dibromoethane	25.0	1.0	ug/L	25.0	NA	100	75-125	0.00	20	
1,2-Dichlorobenzene	25.9	1.0	ug/L	25.0	NA	104	75-125	4.16	20	
1,2-Dichloroethane	25.8	1.0	ug/L	25.0	NA	103	75-125	0.388	20	
1,2-Dichloropropane	26.6	1.0	ug/L	25.0	NA	106	75-125	0.755	20	
1,3,5-Trimethylbenzene	25.0	2.5	ug/L	25.0	NA	100	75-125	0.797	20	
1,3-Dichlorobenzene	25.3	1.0	ug/L	25.0	NA	101	75-125	1.96	20	
1,3-Dichloropropane	25.4	1.0	ug/L	25.0	NA	102	75-125	0.784	20	
1,4-Dichlorobenzene	24.6	1.0	ug/L	25.0	NA	98.4	75-125	1.61	20	
2,2-Dichloropropane	25.4	1.0	ug/L	25.0	NA	102	75-125	0.00	20	
2-Butanone (MEK)	20.4	10	ug/L	25.0	NA	81.6	80-140	6.64	20	
2-Chlorotoluene	24.8	2.5	ug/L	25.0	NA	99.2	75-125	2.00	20	
4-Chlorotoluene	24.7	2.5	ug/L	25.0	NA	98.8	75-125	1.21	20	
4-Isopropyltoluene	24.5	2.5	ug/L	25.0	NA	98.0	75-125	0.813	20	
Acetone	24.2	15	ug/L	25.0	NA	96.8	80-150	2.45	20	
Allyl Chloride	24.7	2.5	ug/L	25.0	NA	98.8	75-125	0.813	20	
Benzene	26.3	1.0	ug/L	25.0	NA	105	75-125	0.381	20	
Bromobenzene	24.8	1.0	ug/L	25.0	NA	99.2	75-125	2.00	20	
Bromochloromethane	25.0	1.0	ug/L	25.0	NA	100	75-125	0.00	20	
Bromodichloromethane	26.2	1.0	ug/L	25.0	NA	105	75-125	0.760	20	
Bromoform	23.8	5.0	ug/L	25.0	NA	95.2	75-125	1.67	20	
Bromomethane	24.9	1.0	ug/L	25.0	NA	99.6	70-130	1.62	20	
Carbon Tetrachloride	24.9	1.0	ug/L	25.0	NA	99.6	75-125	0.00	20	
Chlorobenzene	25.1	1.0	ug/L	25.0	NA	100	75-125	0.800	20	
Chlorodibromomethane	25.6	1.0	ug/L	25.0	NA	102	75-125	0.778	20	
Chloroethane	25.2	1.0	ug/L	25.0	NA	101	75-125	1.20	20	
Chloroform	25.6	1.0	ug/L	25.0	NA	102	75-125	1.18	20	



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Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0042 - EPA 5030B

Laboratory Control Sample Duplicate (B8I0042-BSD1)

Prepared & Analyzed: 09/03/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloromethane	24.0	1.0	ug/L	25.0	NA	96.0	75-125	0.418	20	
cis-1,2-Dichloroethene	26.0	1.0	ug/L	25.0	NA	104	75-125	1.16	20	
cis-1,3-Dichloropropene	24.3	1.0	ug/L	25.0	NA	97.2	75-125	0.820	20	
Dibromomethane	25.7	1.0	ug/L	25.0	NA	103	75-125	1.93	20	
Dichlorodifluoromethane	19.8	1.0	ug/L	25.0	NA	79.2	70-130	2.00	20	
Dichlorofluoromethane	25.8	1.0	ug/L	25.0	NA	103	75-125	2.75	20	
Ethyl Ether	25.6	1.0	ug/L	25.0	NA	102	75-125	0.390	20	
Ethylbenzene	26.4	2.5	ug/L	25.0	NA	106	75-125	1.53	20	
Hexachlorobutadiene	23.2	2.0	ug/L	25.0	NA	92.8	75-125	5.86	20	
Isopropylbenzene	25.1	2.5	ug/L	25.0	NA	100	75-125	2.42	20	
m,p-Xylenes	49.5	2.5	ug/L	50.0	NA	99.0	75-125	2.04	20	
Methyl Isobutyl Ketone	22.8	5.0	ug/L	25.0	NA	91.2	75-125	5.13	20	
Methylene chloride	23.3	5.0	ug/L	25.0	NA	93.2	75-125	2.17	20	
Methyl-t-butyl ether	25.3	10	ug/L	25.0	NA	101	75-125	4.63	20	
Naphthalene	23.0	2.5	ug/L	25.0	NA	92.0	75-125	12.6	20	
n-Butylbenzene	25.0	2.5	ug/L	25.0	NA	100	75-125	0.797	20	
n-Propylbenzene	23.3	10	ug/L	25.0	NA	93.2	75-125	0.428	20	
o-Xylene	24.9	2.5	ug/L	25.0	NA	99.6	75-125	1.62	20	
sec-Butylbenzene	24.6	2.5	ug/L	25.0	NA	98.4	75-125	0.810	20	
Styrene	23.6	10	ug/L	25.0	NA	94.4	75-125	0.425	20	
tert-Butylbenzene	24.3	10	ug/L	25.0	NA	97.2	75-125	0.820	20	
Tetrachloroethene	23.7	2.0	ug/L	25.0	NA	94.8	75-125	0.421	20	
Tetrahydrofuran	20.4	5.0	ug/L	25.0	NA	81.6	75-125	8.00	20	
Toluene	25.4	1.0	ug/L	25.0	NA	102	75-125	1.19	20	
trans-1,2-Dichloroethene	24.9	1.0	ug/L	25.0	NA	99.6	75-125	0.00	20	
trans-1,3-Dichloropropene	24.0	1.0	ug/L	25.0	NA	96.0	75-125	1.65	20	
Trichloroethene	25.0	1.0	ug/L	25.0	NA	100	75-125	0.399	20	
Trichlorofluoromethane	24.5	1.0	ug/L	25.0	NA	98.0	75-125	3.32	20	
Vinyl chloride	24.9	2.5	ug/L	25.0	NA	99.6	70-130	1.21	20	
Surrogate: 1,2-Dichloroethane-d4	24.8		ug/L	25.0	NA	99.2	80-120			
Surrogate: 4-Bromoiodobenzene	25.5		ug/L	25.0	NA	102	80-120			
Surrogate: Dibromoiodomethane	24.9		ug/L	25.0	NA	99.6	80-120			
Surrogate: Toluene-d8	24.7		ug/L	25.0	NA	98.8	80-120			

Braun Intertec-St Cloud
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Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0042 - EPA 5030B

Matrix Spike (B8I0042-MS1)

Source: 0805315-03

Prepared & Analyzed: 09/03/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	25.7	1.0	ug/L	25.0	ND	103	75-125	NA	NA	
1,1,1-Trichloroethane	25.6	1.0	ug/L	25.0	ND	102	75-125	NA	NA	
1,1,2,2-Tetrachloroethane	25.5	1.0	ug/L	25.0	ND	102	75-125	NA	NA	
1,1,2-Trichloroethane	25.7	1.0	ug/L	25.0	ND	103	75-125	NA	NA	
1,1,2-Trichlorotrifluoroethane	24.1	1.0	ug/L	25.0	ND	96.4	75-125	NA	NA	
1,1-Dichloroethane	26.2	1.0	ug/L	25.0	ND	105	75-125	NA	NA	
1,1-Dichloroethene	25.1	1.0	ug/L	25.0	ND	100	75-125	NA	NA	
1,1-Dichloropropene	23.6	2.5	ug/L	25.0	ND	94.4	75-125	NA	NA	
1,2,3-Trichlorobenzene	26.1	1.0	ug/L	25.0	ND	104	75-125	NA	NA	
1,2,3-Trichloropropane	25.8	1.0	ug/L	25.0	ND	103	75-125	NA	NA	
1,2,4-Trichlorobenzene	25.1	1.0	ug/L	25.0	ND	100	75-125	NA	NA	
1,2,4-Trimethylbenzene	25.7	2.5	ug/L	25.0	ND	103	75-125	NA	NA	
1,2-Dibromo-3-chloropropane	22.7	10	ug/L	25.0	ND	90.8	75-125	NA	NA	
1,2-Dibromoethane	26.0	1.0	ug/L	25.0	ND	104	75-125	NA	NA	
1,2-Dichlorobenzene	27.1	1.0	ug/L	25.0	ND	108	75-125	NA	NA	
1,2-Dichloroethane	26.0	1.0	ug/L	25.0	ND	104	75-125	NA	NA	
1,2-Dichloropropane	26.9	1.0	ug/L	25.0	ND	108	75-125	NA	NA	
1,3,5-Trimethylbenzene	25.6	2.5	ug/L	25.0	ND	102	75-125	NA	NA	
1,3-Dichlorobenzene	26.0	1.0	ug/L	25.0	ND	104	75-125	NA	NA	
1,3-Dichloropropane	26.0	1.0	ug/L	25.0	ND	104	75-125	NA	NA	
1,4-Dichlorobenzene	25.2	1.0	ug/L	25.0	ND	101	75-125	NA	NA	
2,2-Dichloropropane	26.3	1.0	ug/L	25.0	ND	105	75-125	NA	NA	
2-Butanone (MEK)	21.3	10	ug/L	25.0	ND	85.2	75-140	NA	NA	
2-Chlorotoluene	25.1	2.5	ug/L	25.0	ND	100	75-125	NA	NA	
4-Chlorotoluene	25.3	2.5	ug/L	25.0	ND	101	75-125	NA	NA	
4-Isopropyltoluene	25.3	2.5	ug/L	25.0	ND	101	75-125	NA	NA	
Acetone	24.2	15	ug/L	25.0	ND	96.8	75-150	NA	NA	
Allyl Chloride	25.7	2.5	ug/L	25.0	ND	103	75-125	NA	NA	
Benzene	26.9	1.0	ug/L	25.0	1.4	102	75-125	NA	NA	
Bromobenzene	25.3	1.0	ug/L	25.0	ND	101	75-125	NA	NA	
Bromochloromethane	25.5	1.0	ug/L	25.0	ND	102	75-125	NA	NA	
Bromodichloromethane	27.0	1.0	ug/L	25.0	ND	108	75-125	NA	NA	
Bromoform	25.0	5.0	ug/L	25.0	ND	100	75-125	NA	NA	
Bromomethane	24.8	1.0	ug/L	25.0	ND	99.2	70-130	NA	NA	
Carbon Tetrachloride	26.2	1.0	ug/L	25.0	ND	105	75-125	NA	NA	
Chlorobenzene	25.5	1.0	ug/L	25.0	ND	102	75-125	NA	NA	
Chlorodibromomethane	26.3	1.0	ug/L	25.0	ND	105	75-125	NA	NA	
Chloroethane	24.8	1.0	ug/L	25.0	ND	99.2	75-125	NA	NA	
Chloroform	26.0	1.0	ug/L	25.0	ND	104	75-125	NA	NA	



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1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0042 - EPA 5030B

Matrix Spike (B8I0042-MS1)

Source: 0805315-03

Prepared & Analyzed: 09/03/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloromethane	24.1	1.0	ug/L	25.0	ND	96.4	75-125	NA	NA	
cis-1,2-Dichloroethene	26.4	1.0	ug/L	25.0	ND	106	75-125	NA	NA	
cis-1,3-Dichloropropene	24.9	1.0	ug/L	25.0	ND	99.6	75-125	NA	NA	
Dibromomethane	26.7	1.0	ug/L	25.0	ND	107	75-125	NA	NA	
Dichlorodifluoromethane	21.1	1.0	ug/L	25.0	ND	84.4	70-130	NA	NA	
Dichlorofluoromethane	25.6	1.0	ug/L	25.0	ND	102	75-125	NA	NA	
Ethyl Ether	25.6	1.0	ug/L	25.0	ND	102	75-125	NA	NA	
Ethylbenzene	27.0	2.5	ug/L	25.0	ND	108	75-125	NA	NA	
Hexachlorobutadiene	25.0	2.0	ug/L	25.0	ND	100	75-125	NA	NA	
Isopropylbenzene	25.3	2.5	ug/L	25.0	ND	101	75-125	NA	NA	
m,p-Xylenes	50.0	2.5	ug/L	50.0	1.5	97.0	75-125	NA	NA	
Methyl Isobutyl Ketone	24.4	5.0	ug/L	25.0	ND	97.6	75-125	NA	NA	
Methylene chloride	23.7	5.0	ug/L	25.0	ND	94.8	75-125	NA	NA	
Methyl-t-butyl ether	27.3	10	ug/L	25.0	ND	109	75-125	NA	NA	
Naphthalene	26.0	2.5	ug/L	25.0	ND	104	75-125	NA	NA	
n-Butylbenzene	25.7	2.5	ug/L	25.0	ND	103	75-125	NA	NA	
n-Propylbenzene	24.0	10	ug/L	25.0	ND	96.0	75-125	NA	NA	
o-Xylene	24.8	2.5	ug/L	25.0	ND	99.2	75-125	NA	NA	
sec-Butylbenzene	25.5	2.5	ug/L	25.0	ND	102	75-125	NA	NA	
Styrene	24.2	10	ug/L	25.0	ND	96.8	75-125	NA	NA	
tert-Butylbenzene	25.1	10	ug/L	25.0	ND	100	75-125	NA	NA	
Tetrachloroethene	25.2	2.0	ug/L	25.0	ND	101	75-125	NA	NA	
Tetrahydrofuran	22.6	5.0	ug/L	25.0	ND	90.4	75-125	NA	NA	
Toluene	25.9	1.0	ug/L	25.0	3.4	90.0	75-125	NA	NA	
trans-1,2-Dichloroethene	26.0	1.0	ug/L	25.0	ND	104	75-125	NA	NA	
trans-1,3-Dichloropropene	24.7	1.0	ug/L	25.0	ND	98.8	75-125	NA	NA	
Trichloroethene	26.3	1.0	ug/L	25.0	ND	105	75-125	NA	NA	
Trichlorofluoromethane	24.5	1.0	ug/L	25.0	ND	98.0	75-125	NA	NA	
Vinyl chloride	24.4	2.5	ug/L	25.0	ND	97.6	70-130	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	24.6		ug/L	25.0	NA	98.4	80-120			
Surrogate: 4-Bromofluorobenzene	25.1		ug/L	25.0	NA	100	80-120			
Surrogate: Dibromofluoromethane	24.9		ug/L	25.0	NA	99.6	80-120			
Surrogate: Toluene-d8	24.7		ug/L	25.0	NA	98.8	80-120			

Braun Intertec-St Cloud
 1520 24th Ave N P.O. Box 189
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Client Ref: Electric Machinery Site
 Client Contact: Mr. Andy Brummer
 PO Number: SC-06-04965B

Work Order #: 0805225
 Project Mgr: William R. Dahl
 Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0042 - EPA 5030B

Matrix Spike Duplicate (B8I0042-MSD1)

Source: 0805315-03

Prepared & Analyzed: 09/03/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	25.9	1.0	ug/L	25.0	ND	104	75-125	0.775	20	
1,1,1-Trichloroethane	25.2	1.0	ug/L	25.0	ND	101	75-125	1.57	20	
1,1,2,2-Tetrachloroethane	25.2	1.0	ug/L	25.0	ND	101	75-125	1.18	20	
1,1,2-Trichloroethane	25.7	1.0	ug/L	25.0	ND	103	75-125	0.00	20	
1,1,2-Trichlorotrifluoroethane	24.0	1.0	ug/L	25.0	ND	96.0	75-125	0.416	20	
1,1-Dichloroethane	25.6	1.0	ug/L	25.0	ND	102	75-125	2.32	20	
1,1-Dichloroethene	24.4	1.0	ug/L	25.0	ND	97.6	75-125	2.83	20	
1,1-Dichloropropene	23.7	2.5	ug/L	25.0	ND	94.8	75-125	0.423	20	
1,2,3-Trichlorobenzene	26.0	1.0	ug/L	25.0	ND	104	75-125	0.384	20	
1,2,3-Trichloropropane	25.7	1.0	ug/L	25.0	ND	103	75-125	0.388	20	
1,2,4-Trichlorobenzene	25.2	1.0	ug/L	25.0	ND	101	75-125	0.398	20	
1,2,4-Trimethylbenzene	25.8	2.5	ug/L	25.0	ND	103	75-125	0.388	20	
1,2-Dibromo-3-chloropropane	22.2	10	ug/L	25.0	ND	88.8	75-125	2.23	20	
1,2-Dibromoethane	26.0	1.0	ug/L	25.0	ND	104	75-125	0.00	20	
1,2-Dichlorobenzene	27.1	1.0	ug/L	25.0	ND	108	75-125	0.00	20	
1,2-Dichloroethane	25.6	1.0	ug/L	25.0	ND	102	75-125	1.55	20	
1,2-Dichloropropane	26.9	1.0	ug/L	25.0	ND	108	75-125	0.00	20	
1,3,5-Trimethylbenzene	25.6	2.5	ug/L	25.0	ND	102	75-125	0.00	20	
1,3-Dichlorobenzene	25.9	1.0	ug/L	25.0	ND	104	75-125	0.385	20	
1,3-Dichloropropane	26.1	1.0	ug/L	25.0	ND	104	75-125	0.384	20	
1,4-Dichlorobenzene	25.2	1.0	ug/L	25.0	ND	101	75-125	0.00	20	
2,2-Dichloropropane	26.0	1.0	ug/L	25.0	ND	104	75-125	1.15	20	
2-Butanone (MEK)	21.2	10	ug/L	25.0	ND	84.8	75-140	0.471	20	
2-Chlorotoluene	25.0	2.5	ug/L	25.0	ND	100	75-125	0.399	20	
4-Chlorotoluene	25.1	2.5	ug/L	25.0	ND	100	75-125	0.794	20	
4-Isopropyltoluene	25.2	2.5	ug/L	25.0	ND	101	75-125	0.396	20	
Acetone	22.0	15	ug/L	25.0	ND	88.0	75-150	9.52	20	
Allyl Chloride	25.3	2.5	ug/L	25.0	ND	101	75-125	1.57	20	
Benzene	26.5	1.0	ug/L	25.0	1.4	100	75-125	1.50	20	
Bromobenzene	25.5	1.0	ug/L	25.0	ND	102	75-125	0.787	20	
Bromochloromethane	25.4	1.0	ug/L	25.0	ND	102	75-125	0.393	20	
Bromodichloromethane	26.5	1.0	ug/L	25.0	ND	106	75-125	1.87	20	
Bromoform	24.8	5.0	ug/L	25.0	ND	99.2	75-125	0.803	20	
Bromomethane	24.6	1.0	ug/L	25.0	ND	98.4	70-130	0.810	20	
Carbon Tetrachloride	25.6	1.0	ug/L	25.0	ND	102	75-125	2.32	20	
Chlorobenzene	25.6	1.0	ug/L	25.0	ND	102	75-125	0.391	20	
Chlorodibromomethane	26.4	1.0	ug/L	25.0	ND	106	75-125	0.380	20	
Chloroethane	24.3	1.0	ug/L	25.0	ND	97.2	75-125	2.04	20	
Chloroform	25.6	1.0	ug/L	25.0	ND	102	75-125	1.55	20	



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Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

Volatile Organic Compounds - Quality Control

Batch B8I0042 - EPA 5030B

Matrix Spike Duplicate (B8I0042-MSD1)

Source: 0805315-03

Prepared & Analyzed: 09/03/08

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloromethane	23.8	1.0	ug/L	25.0	ND	95.2	75-125	1.25	20	
cis-1,2-Dichloroethene	25.9	1.0	ug/L	25.0	ND	104	75-125	1.91	20	
cis-1,3-Dichloropropene	24.7	1.0	ug/L	25.0	ND	98.8	75-125	0.806	20	
Dibromomethane	25.6	1.0	ug/L	25.0	ND	102	75-125	4.21	20	
Dichlorodifluoromethane	20.7	1.0	ug/L	25.0	ND	82.8	70-130	1.91	20	
Dichlorofluoromethane	24.7	1.0	ug/L	25.0	ND	98.8	75-125	3.58	20	
Ethyl Ether	24.6	1.0	ug/L	25.0	ND	98.4	75-125	3.98	20	
Ethylbenzene	26.8	2.5	ug/L	25.0	ND	107	75-125	0.743	20	
Hexachlorobutadiene	25.3	2.0	ug/L	25.0	ND	101	75-125	1.19	20	
Isopropylbenzene	25.3	2.5	ug/L	25.0	ND	101	75-125	0.00	20	
m,p-Xylenes	50.0	2.5	ug/L	50.0	1.5	97.0	75-125	0.00	20	
Methyl Isobutyl Ketone	23.2	5.0	ug/L	25.0	ND	92.8	75-125	5.04	20	
Methylene chloride	23.4	5.0	ug/L	25.0	ND	93.6	75-125	1.27	20	
Methyl-t-butyl ether	26.6	10	ug/L	25.0	ND	106	75-125	2.60	20	
Naphthalene	26.0	2.5	ug/L	25.0	ND	104	75-125	0.00	20	
n-Butylbenzene	25.5	2.5	ug/L	25.0	ND	102	75-125	0.781	20	
n-Propylbenzene	24.0	10	ug/L	25.0	ND	96.0	75-125	0.00	20	
o-Xylene	25.0	2.5	ug/L	25.0	ND	100	75-125	0.803	20	
sec-Butylbenzene	25.2	2.5	ug/L	25.0	ND	101	75-125	1.18	20	
Styrene	24.0	10	ug/L	25.0	ND	96.0	75-125	0.830	20	
tert-Butylbenzene	25.1	10	ug/L	25.0	ND	100	75-125	0.00	20	
Tetrachloroethene	25.1	2.0	ug/L	25.0	ND	100	75-125	0.398	20	
Tetrahydrofuran	20.9	5.0	ug/L	25.0	ND	83.6	75-125	7.82	20	
Toluene	25.8	1.0	ug/L	25.0	3.4	89.6	75-125	0.387	20	
trans-1,2-Dichloroethene	26.0	1.0	ug/L	25.0	ND	104	75-125	0.00	20	
trans-1,3-Dichloropropene	24.4	1.0	ug/L	25.0	ND	97.6	75-125	1.22	20	
Trichloroethene	25.7	1.0	ug/L	25.0	ND	103	75-125	2.31	20	
Trichlorofluoromethane	23.5	1.0	ug/L	25.0	ND	94.0	75-125	4.17	20	
Vinyl chloride	24.2	2.5	ug/L	25.0	ND	96.8	70-130	0.823	20	
Surrogate: 1,2-Dichloroethane-d4	24.1		ug/L	25.0	NA	96.4	80-120			
Surrogate: 4-Bromoiodobenzene	25.4		ug/L	25.0	NA	102	80-120			
Surrogate: Dibromoiodomethane	24.9		ug/L	25.0	NA	99.6	80-120			
Surrogate: Toluene-d8	25.0		ug/L	25.0	NA	100	80-120			

Braun Intertec-St Cloud
1520 24th Ave N P.O. Box 189
St Cloud, MN 56302-0189

Client Ref: Electric Machinery Site
Client Contact: Mr. Andy Brummer
PO Number: SC-06-04965B

Work Order #: 0805225
Project Mgr: William R. Dahl
Account ID:

For Braun Intertec Use Only Laboratory Work Order No.		BRAUN INTERTEC		REQUEST FOR LABORATORY ANALYTICAL SERVICES		Page <u>1</u> of <u>1</u>																																																																																															
0805225		Braun Intertec Corporation 11001 Hampshire Ave. S Minneapolis, MN 55438		Bottle orders and sampling inquiries: labservices@braunintertec.com Phone: 952-995-2600 Fax: 952-995-2601		IMPORTANT Date Results Requested: _____ Time _____ Rush Charges Authorized? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Rush / Quote # _____																																																																																															
RESULTS TO Contact Name <u>Andy Brummer</u> Company _____ Mailing Address _____ City, State, Zip <u>St. Cloud, MN office</u> Telephone # _____ Fax # _____ E-mail _____		Project ID/Name <u>Electric Machinery Site</u>		P.O. #/Project # <u>SC-06-04965B</u>																																																																																																	
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CHAIN OF CUSTODY		Collected by: (Print) <u>Andy Brummer</u>		Collector's Signature: <u>Andy Brummer</u>																																																																																																	
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